

BUSINESS WEEK

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WHO WILL BUILD THE
**Atomic
Power Plants?**
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Polaroid's Land: He's throwing the bank account behind a new camera (page 102)

A MCGRAW-HILL PUBLICATION

JUNE 12, 1954

E B POWER
 UNIVERSITY MICROFILMS
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 C 8-



Growing
bigger
than their
Dads

TOSS OUT the laws of heredity when you plant in land fertilized with Shell ammonia, for it encourages crops to grow greener, bigger, faster.

The magic is in the "N" (nitrogen) of Shell NH_3 , for nitrogen builds chlorophyll, the plant's food factory, and Shell ammonia is *better than 81% nitrogen*. Pound for pound, no other fertilizer comes close to ammonia's nitrogen content.

Shell makes ammonia fertilizer from air and natural gas. It may be applied to the soil of Western farms through irrigation

water or by direct injection. Either way the farmer may choose to have Shell do the whole job. And, either way, the cost of fertilizing is usually repaid 4 times over by extra crop values.

Twenty years ago, Shell developed the use of ammonia as a farm fertilizer, then invented the techniques and equipment for getting it into the soil. Since then, through Shell's system of service and distribution, more than 500,000 applications have been made to every kind of crop.



Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

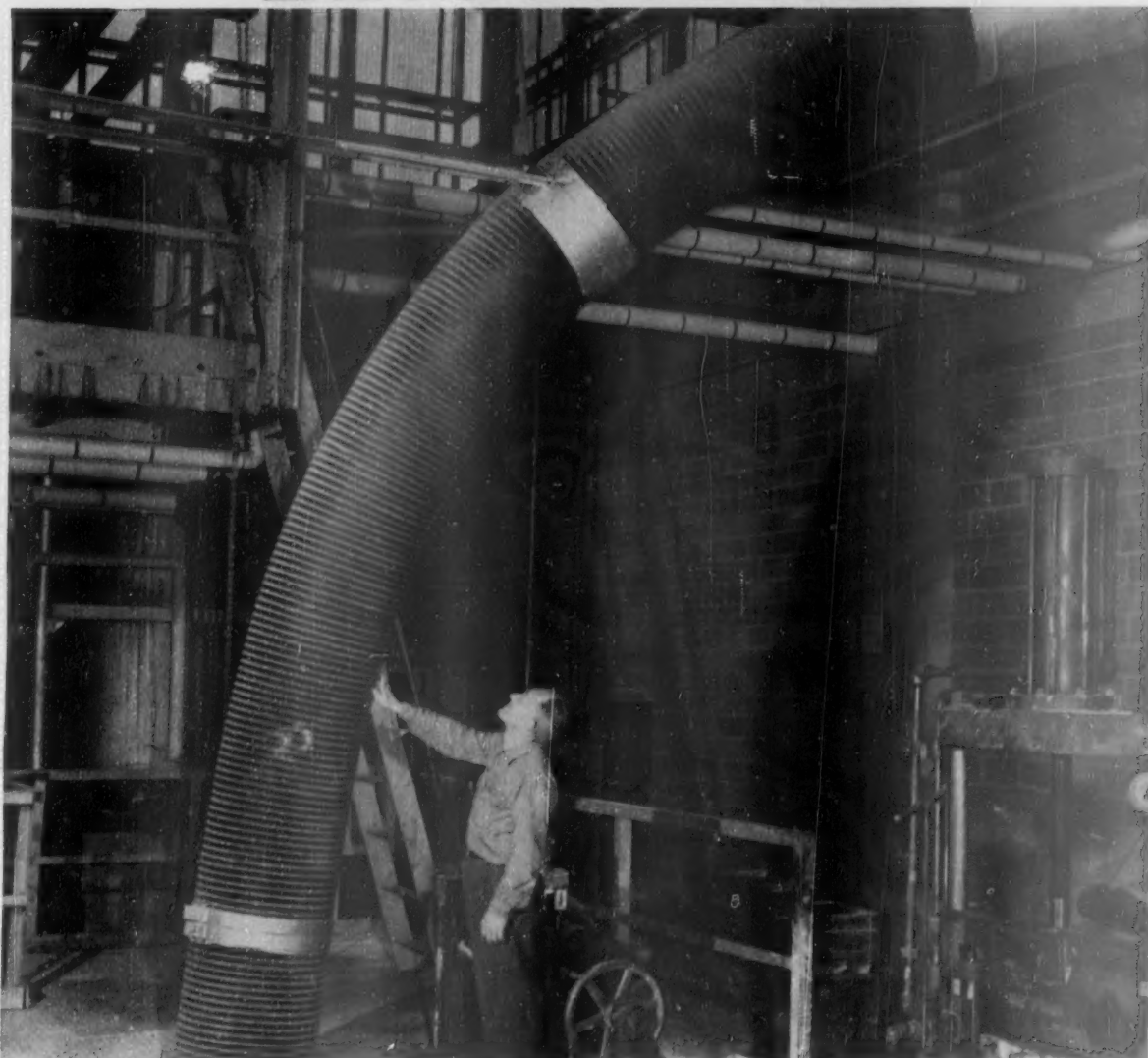
NEW YORK • SAN FRANCISCO



RESEARCH KEEPS

B.F. Goodrich

FIRST IN RUBBER



Sawdust hurricane tamed by rubber

A typical example of B. F. Goodrich improvement in rubber

HUNDREDS of wooden boxes come into this plant every day. For years they were just thrown away. Then an engineer had an idea. Why not grind them up and use them for fuel?

The idea worked fine except for a metal pipe the sawdust was blown through on the way to the furnace. The hurricane of flying wood splinters and chips wore it out in three months. This meant five hours labor while it was repaired, to say nothing of the expense for materials.

The local B. F. Goodrich distributor

suggested they use a B. F. Goodrich rubber hose made out of a special kind of rubber. He told the plant engineers how it outlasts steel on gravel chutes ten to one.

Sawdust has been whistling through the new B. F. Goodrich rubber hose for more than 18 months now and there's not a sign of any need for a replacement. The splinters and chips simply bounce off the rubber, doing no harm.

Even now, with a record like this, B. F. Goodrich engineers are looking for a way to make this rubber better.

Improvement is always going on at B. F. Goodrich. All types of hose, conveyor belts, V belts, even "kinds" of rubber, get their share of thought. Nothing is ever standard. Don't decide any rubber product you use or need is the best until you see your BFG distributor. He will tell you how B. F. Goodrich has improved it. *The B. F. Goodrich Company, Dept. M-253, Akron 18, Ohio.*

B.F. Goodrich
INDUSTRIAL PRODUCTS
DIVISION



Microwaves Replace Wires, Carry 2,000 Telegrams at Once

"WEATHER-PROOF" RELAY NETWORK INCREASES SPEED IN COMMUNICATIONS

THE STORY BEHIND THE STORY:

- You find "microwaves" in the headlines over and over again these days—extending the range of television, adding to your protection when you travel by plane, ship or train, and as in the headline above, carrying your telegrams even faster and more efficiently than ever before.
- Generating these microwaves is a special type vacuum tube—an electronic device developed by Sperry and called the Klystron. About the size of your hand,

the particular Sperry Klystron developed for Western Union provides sufficient power to permit a reliable beamed communications system carrying 2,000 telegrams through the air at the same time, between towers up to 50 miles apart. Rain, winds, storms—even lightning—have no effect. Messages go undelayed in complete safety—ideal for secret defense communications.

■ Sperry's development of the Klystron opened the door to countless new electronic developments that strengthen our defenses, aid industry, and make living more pleasant. The very heart of radar

and radar defense systems is the Klystron. It puts the all-weather eyes into today's precision bombing systems, is responsible for the accuracy of air navigation systems, and makes possible anti-collision devices aboard ships at sea. Microwaves generated by these versatile tubes bring television into your home—even control the flow in cross-country oil and gas lines!

■ The application of microwaves is being extended more and more by industry and government in their search for simpler, more economical operations. Today, with this broadening use of microwaves, the Sperry developed Klystron has, in fact, become a servant to the American public.

SPERRY *GYROSCOPE COMPANY*

DIVISION OF THE SPERRY CORPORATION • GREAT NECK, N.Y.

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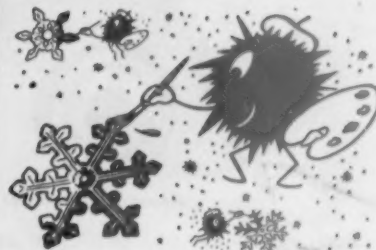
BUSINESS WEEK • JUNE 12 • NUMBER 1293

(with which are combined The Annalist and the Magazine of Business) Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder & Publication Office, 99-129 North Broadway, Albany, N. Y. 12242. **Editorial, Executive and Advertising Offices:** 330 West 42nd St., New York 36, N. Y. **Donald C. McGraw,** President; **William Chevrolet,** Executive Vice-President; **Joseph A. Gerardi,** Vice-President and Treasurer; **John J. Cooke,** Secretary; **Paul Montgomery,** Executive Vice-President, Publications Division; **Ralph B. Smith,** Vice-President and Editorial Director; **Nelson Bond,** Vice-President and Director of Advertising. Subscriptions: Address correspondence regarding subscriptions to J. B. Blackburn, Jr., Vice-

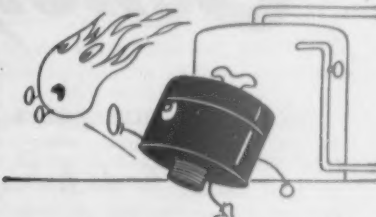
President and Director of Circulation. **Business Week**, 99-129 N. Broadway, Albany 1, N. Y., or 330 West 42nd St., New York 36. Allow one month for change of address. Subscriptions to **Business Week** are solicited only from management-men in business and industry. Position and company connection must be indicated on subscription orders. Single copies 25c. Subscription rates—United States and possessions \$6.00 a year; \$12.00 for three years. Canada \$7.00 a year; \$14.00 for three years. Other Western Hemisphere countries \$15 a year; \$30.00 for three years. All other countries \$25 a year; \$50.00 for three years. Entered as second class matter Dec. 4, 1936, at the Post Office at Albany, N. Y. under Act of Mar. 3, 1879. Printed in U. S. A. Copyright 1964 by McGraw-Hill Publishing Co., Inc.—All Rights Reserved.

AIR-MAZING FACTS

BY O. SOGLOW



DUST PAINTS SNOW FOUR COLORS! White snow was at a premium last March! In a two-day period, pink snow fell in Iowa, blue snow in South Dakota, brown snow in Kansas and red snow in, of all places, Greenland! Meteorologists believe dust particles from volcanoes and deserts caused the multi-colored snowfall.



NO ADMITTANCE! Flame, sparks and dirt can't get past a tank vent that has an Air-Maze flame arrester. For use on tanks where inflammable liquids are stored, Air-Maze approved flame arresters give dependable protection.



CLEAN AIR BY THE DRAWERFUL. Electromaze electronic air-filters stop fine dust, pollen and smoke. Filter cells slide in and out like file cabinet drawers for easy servicing. "Building block" construction allows greater flexibility in size.

WHETHER YOU BUILD OR USE engines, compressors, air-conditioning and ventilating equipment, or any device using air or liquids—the chances are there is an Air-Maze filter engineered to serve you better. Representatives in all principal cities. For condensed product catalog, write Air-Maze Corporation, Dept. C, 25000 Miles Rd., Cleveland 28, Ohio.

AIR-MAZE

The Filter Engineers

AIR FILTERS
SILENCERS
SPARK ARRESTERS

LIQUID FILTERS
OIL SEPARATORS
GREASE FILTERS



Aneroid Barometer



Depth Recorder



Depth Indicator



Zenith Carburetor
and Flame Arrestor



Bendix on boats!

*navigates . . . steers . . .
finds fish . . . forecasts
weather . . . communicates . . .
improves Pleasure
and Commercial boating
so many ways!*



IF BOATING isn't your business or pleasure, you probably were not aware that Bendix diversity ranges well into the marine field with a big package of high-quality devices which makes power boats safer, easier and more profitable to operate.

Here, illustrated, is a representative group of products for use primarily by cruiser-type pleasure and commercial fishing boats. Clockwise, just above our name, are:

Aneroid Barometer . . . an inexpensive, dependable, easy-to-read instrument that shows pressure and barometric tendency. One of a complete line of weather instruments made by our Friez division for the world's weather bureaus.

Depth Recorder . . . electronic navigation aid. Draws accurate profiles of ocean floor. Also shows up schools of fish. Almost a standard tool of commercial fishermen, now available to sport fishermen. A Pacific Division product.

Depth Indicator . . . visual indicator favored for lakes and rivers. Shows up sand bars, underwater

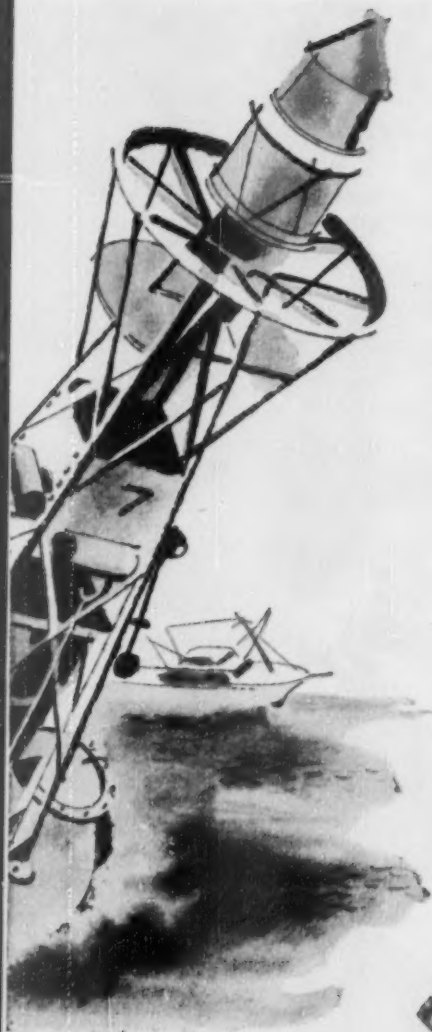
obstacles. Has helped Mississippi pilots slice 36 hours off New Orleans-St. Louis run. A Pacific Division product.

Zenith* Carburetor and Flame Arrestor . . . famous for its economy and dependability. The flame arrestor is protection against fire that might result from backfiring.

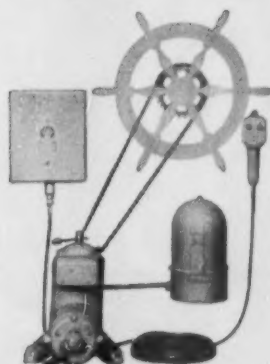
Ship-to-Shore Radio . . . Bendix offers a complete line of top-quality radio telephone equipment. Also radio direction finders which establish ship's position via accurate sense bearings on known radio transmission stations. Pacific Division products.

Automatic Pilot and Remote Steering Control . . . frees you from wheel-work. Will steer a straighter course than the best helmsman day or night, clear or fog, rough or calm. Pacific Division products.

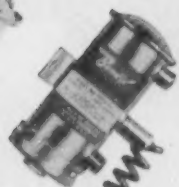
Electric Fuel Pump . . . dependable and explosion-proof! Can deliver more than 30 gallons per hour. Eliminates vapor lock even in hottest weather. When needed, two or more pumps can be manifolded. An Eclipse Machine Division product.



Ship-to-Shore Radio



Automatic Pilot and Remote Steering Control



Electric Fuel Pump

Broad View of Bendix

The picture above is a glimpse of Bendix. We research, engineer and manufacture about a thousand different products for about every basic industry . . . from bobbin-holders for textile people to confidential components for the guided-missiles and nuclear physics fields. Television, radar, ultrasonics, telemetering and synthetic resins are other fields of endeavor.

How Bendix Can Help You

We will be glad to send you the complete story of Bendix Aviation, our products and facilities, now in booklet form. You are almost certain to discover one or more ways we can contribute to your business. Please make requests for "Bendix and Your Business" on your company letterhead direct to:

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Fisher Building, Detroit 2, Michigan



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telemetering equipment; hydraulic and electric actuators; depth recorders; boat steerers.

ZENITH* CARBURETOR, DETROIT, MICH.
automotive, marine and small engine carburetors.

ECLIPSE MACHINE, ELMIRA, N. Y.
Stromberg* carburetors, electric fuel pumps, starter drives, coaster brakes.

BENDIX FRIEZ, TOWSON, MD.
meteorological instruments; precision instruments and recorders.

BENDIX PRODUCTS, SOUTH BEND, IND.
automotive brakes, carburetors, power steering; aviation brakes, landing gear, fuel metering.

ECLIPSE-PIONEER, TETERBORO, N. J.
aviation instruments and components; foundry.

SCINTILLA, SIDNEY, N. Y.
aviation ignition systems; industrial engine magnetos; diesel fuel injection.

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radar; auto, railroad, mobile and aviation radio; television.

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brake blocks, brake lining, synthetic resins.

RED BANK, EATONTOWN, N. J.
electronic tubes; dynamotors, inverters.

BENDIX-SKINNER, DETROIT, MICH.
micronic filters.

CINCINNATI, CINCINNATI, OHIO
automatic viscosity regulators, nuclear products.

BENDIX COMPUTER, LOS ANGELES, CALIF.
digital computers.

HAMILTON, HAMILTON, OHIO
jet engine controls and aircraft pumps.

LAKE SHORE, ST. JOSEPH, MICH.
power steering and automotive devices.

UTICA, UTICA, N. Y.
aviation components.

MONTROSE, SOUTH MONTROSE, PA.
aviation components.

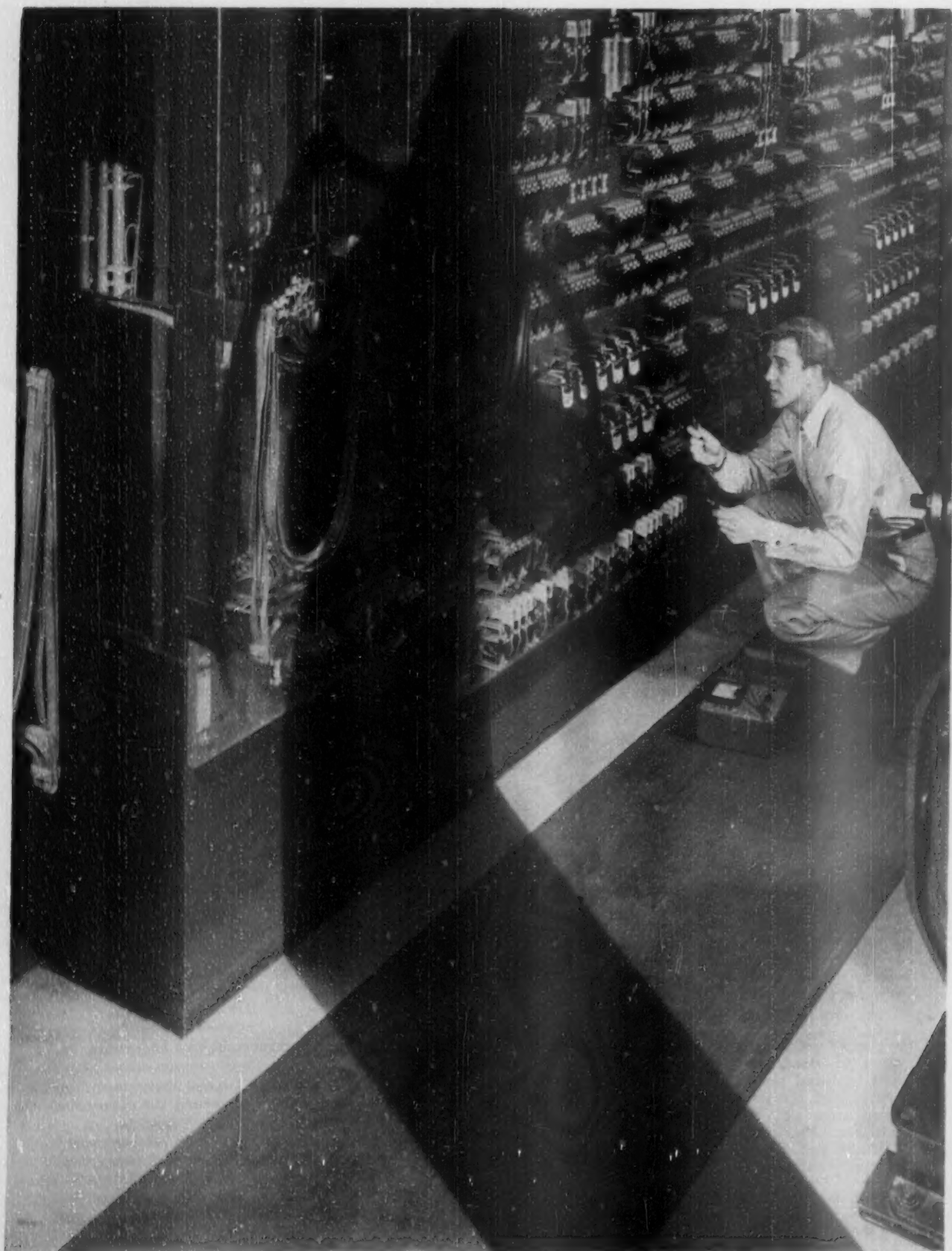
PIONEER CENTRAL, DAVENPORT, IOWA
aviation instruments and components.


YORK, YORK, PA.
electronic devices; test equipment

BENDIX-ECLIPSE OF CANADA, LTD.
Windsor, Ont.

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New York City

*REG. U. S. PAT. OFF.





Dispel the Shadow of Time...

Modernize Your Elevators

He had his foot in the door the first day your building was complete. Then he moved in; little by little took up more space until suddenly—Father Time became a troublesome tenant.

An investment in Westinghouse elevator modernization may be just what your building needs to help you meet new building competition.

Our elevator modernization experts help make the most of your existing installation. They add new equipment only when necessary to make your system equal to that of any *new* building, both in operation *and* appearance.

Westinghouse modernization experts have helped management increase rentals in *all* types of buildings. Their service has kept existing buildings young in the face of new building competition by providing fast, smooth, efficient Westinghouse elevator service.

Our engineers are ready to talk over your problems at any time. Call our nearest office today.

Westinghouse Elevators

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS
PROTECTIVE MAINTENANCE AND SERVICE

YOU CAN BE SURE...IF IT'S **Westinghouse**

J-95703

"JOB-FITTED COMBINATION SCRUBBER-VAC

PUTS FLOOR-CLEANING ON PRODUCTION BASIS

throughout our plant"



—Says Superintendent of Maintenance
VICTOR ADDING MACHINE COMPANY

Victor Adding Machine Company, Chicago, insists on maximum production in floor-cleaning as well as in manufacturing. Like other production-wise industrial concerns, Victor cleans floors with a Job-Fitted Combination Scrubber-Vac! This single unit

Completely Mechanizes Scrubbing

—applies the cleanser, scrubs, flushes if required, and picks up — *all in one operation!* Job-fitted to specific needs, a Scrubber-Vac provides maximum brush coverage. Model 213P, shown in illustrations at left, is designed for heavy duty scrubbing of large-area floors. It has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! Finnell makes still larger sizes — in gasoline as well as electric models — and also sizes for smaller operations. From this complete line, you can choose the Scrubber-Vac that will put your floor-cleaning on a production basis and reduce labor costs. And you can lease or purchase the machine. Maintenance men like the convenience of working with a Scrubber-Vac. This *all-in-one* unit is self-propelled, and there are no switches to set for fast or slow — slight pressure of the hand on clutch lever adjusts speed to desired rate.

It's also good to know there's a Finnell Floor Specialist and Engineer nearby to help train your operators in the proper use of Finnell Equipment and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3806 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

*Originators of
Power Scrubbing and Polishing Machines*

FINNELL

BRANCHES
IN ALL
PRINCIPAL
CITIES

READERS REPORT

New Era in Printing

Dear Sir:

Having recently completed an eight month student research project on new developments in the printing industry, at the Harvard Business School, we notice that . . . your article on photocomposition [BW—May 15 '54, p.66] states: "The new process is called photocomposition. . . . The idea is still new."

. . . The commercial application of phototypesetting is definitely new. However, the idea could hardly be called novel as the first patents for the process were filed in England 98 years ago. The Bawtree machine which dates back to 1915 was based on those patents. In 1910, William C. Huebner designed a machine for setting type on film in this country; at the same time, Arthur Dutton . . . in Great Britain, was devising the Photoline machine. In 1926, J. R. C. August designed the August-Hunter machine, and in 1936 the Uher-type was devised by the German printing manufacturer, M.A.N.

We sincerely hope that the industry will take advantage of the Fotosetter, Photon and Linofilm mentioned by your article, and that it will not consider them "new" fifty years from now.

RAPHAEL H. BERESFORD
STANLEY J. DAVIDSON
OTTO P. GEIER, JR.
DONALD C. HAYS
ALEXANDER D. MAIDANATZ
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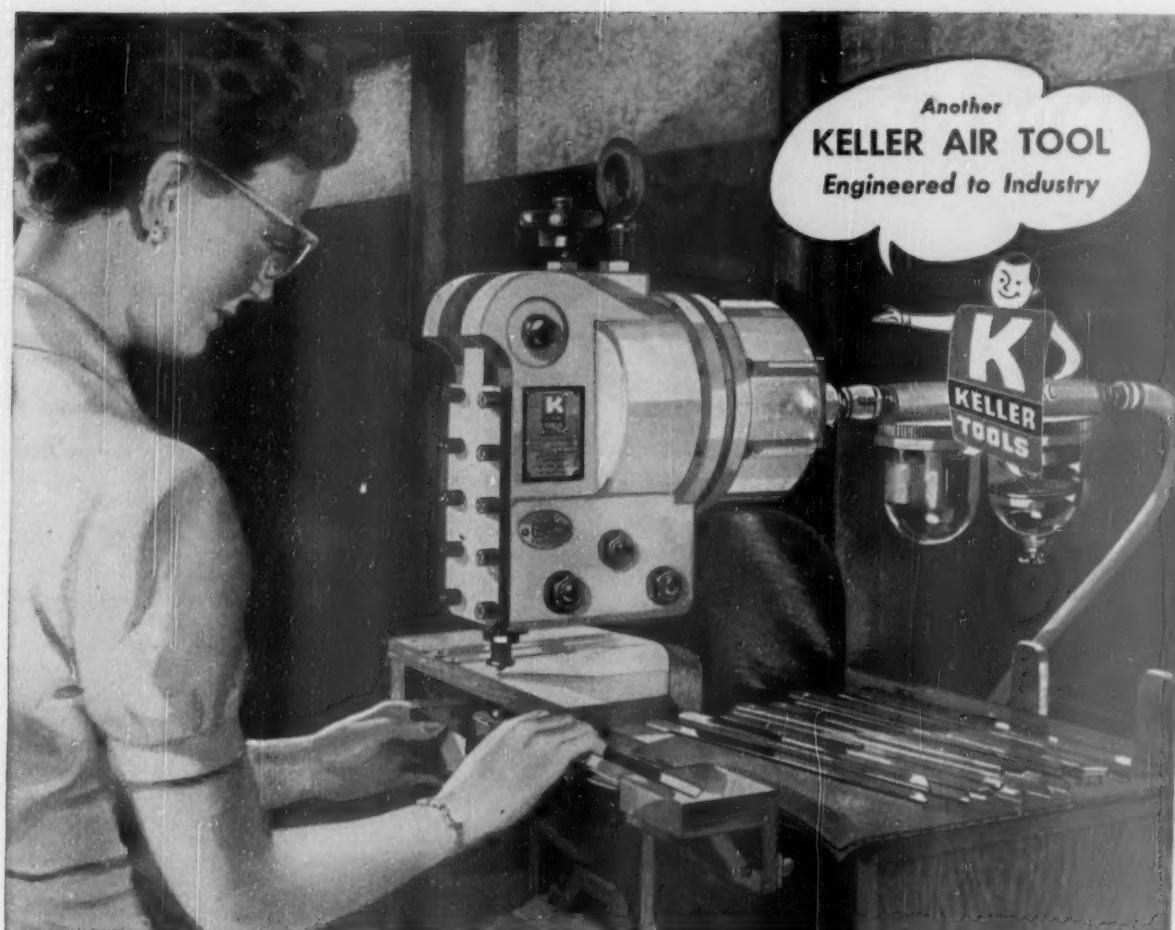
PRINTING RESEARCH
CAMBRIDGE, MASS.

Dear Sir:

(Re) your May 15 article, *For Printing: A Step Beyond the Linotype?* . . . a fourth machine . . . not only serves an identical purpose but is in production and on the market. It is the "Justewriter," built by Commercial Controls Corp. of Rochester, N. Y. . . .

The Justewriter does the things your article outlines for the Linofilm, Photon and Fotosetter with one . . . cost-saving exception. It does not use film. It also has a limitation that only one size of cold type can be set on a given machine. . . .

The Justewriter is operated like the Linofilm in that a typist punches a tape which is fed into a reproducing unit, and justification is electronic. But instead of reproducing on film, at a considerable cost per measured unit, it reproduces with a carbon ribbon on to slick paper. This gives an excellent "proof" for offset reproduction at extremely low cost and at a continuous



SQUEEZE PLAY BOOSTS PRODUCTION SCORES

A compression riveter that delivers its power with a squeeze instead of a slap, has boosted the assembly of these toggle links to 150 units an hour. The links are used in making folding high chairs.

A second compression riveter in the same plant swages clips onto adjusting springs—an operation that has also attained the high rate of 150 pieces an hour.

The reason for these remarkable production scores is the riveter itself, which operates on compressed air. When

the ram of a Keller Compression Riveter comes down against the work, it doesn't need to strike with the full impact necessary to carry through to the end of the stroke because air pressure builds up steadily behind the ram and keeps forcing it down . . . maximum pressure being attained only at the end of the stroke.

In contrast with riveters that depend on the initial impact for carry-through, Keller Pneumatic Riveters cause less deformation of small, fragile

parts, less distortion, less breakage, and fewer rejects.

As a result, Keller Compression Riveters have many uses where a squeeze is better than a slap—for punching, crimping, staking, and forming operations in addition to riveting.

The compression riveter is only one of many Keller Air Tools that speed production and reduce costs. Have you discussed your problems with the factory-trained Keller application engineer near you? He is as near as your phone.

KELLER TOOL COMPANY

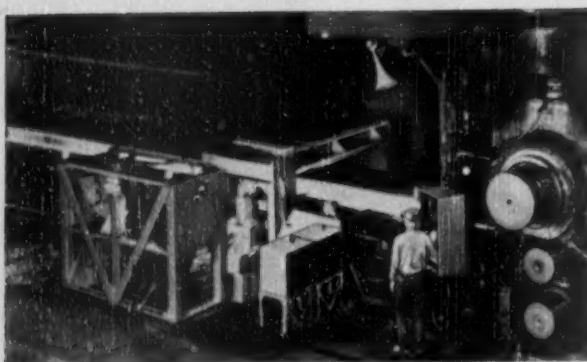
1301 FULTON STREET

GRAND HAVEN, MICHIGAN



INDUSTRY Lives by the

INCH



With a white-hot ribbon of steel racing through the rolls at express train speed, a lot of scrap can be produced in an incredibly short time unless roll adjustment is under immediate and constant control.

Control involves continuous gaging just behind the rolls but since the strip is white-hot, contact gages are impossible.

Thus about seven years ago Sheffield Research undertook the difficult problem of a non-contact gage. In due course the Measuray was perfected. With it, the thickness of the steel moving under the gaging head is accurately measured by indicating its resistance to X-ray penetration.

Today the Measuray is used not only in the rolling of steel, brass and aluminum, but also to control the thickness of many other products such as plastics, coated fabrics, film, rubber, etc. Another Sheffield contribution which is helping industry to live by the inch more profitably.

Without modern economical production equipment to assure interchangeability, both the mass production assembly line and today's replacement parts system would be impossible.

Industry lives by the inch.

Measuray Division, The Sheffield Corporation
Dayton 1, Ohio, U.S.A.



SHEFFIELD

reproducing speed of 120 words per minute.

The only present disadvantage we find is that the Justwriter 8-point type face is unsightly for solid newspaper copy . . . however . . . this shortcoming will be eliminated. . . .

JOHN R. THISTLETHWAITE

EDITOR & PUBLISHER
DAILY WORLD
OPELOUSAS, LA.

Dear Sir:

. . . the article refers to a four-page booklet on photocomposing processes just issued by our organization. . . .

. . . The booklet . . . contains 48 pages, and not four. . . .

A. SANDY BEVIS

DIRECTOR
INTERNATIONAL TYPOGRAPHICAL
UNION
INDIANAPOLIS, IND.

• That's the worst of this old-fashioned equipment. . . .

The Dilemma

Dear Sir:

. . . (Re) your editorial, *The Sponsor's Dilemma* [BW—May 1954, p160].

. . . I agree that Alcoa is rendering a great service to the television audience by sponsoring "See It Now." I, too, hope the service will not be suspended. The sponsor pays for the time and the program. I believe that the sponsor inserts a disclaimer. Perhaps the writer of the editorial, or someone else, has a better suggestion to make.

As to sponsors of programs such as this, I agree that they should not have anything to do with the program's content. I think the way it is being handled at the present time is probably the way it should be done, and will be done, but you have opened a point that deserves greater exploration.

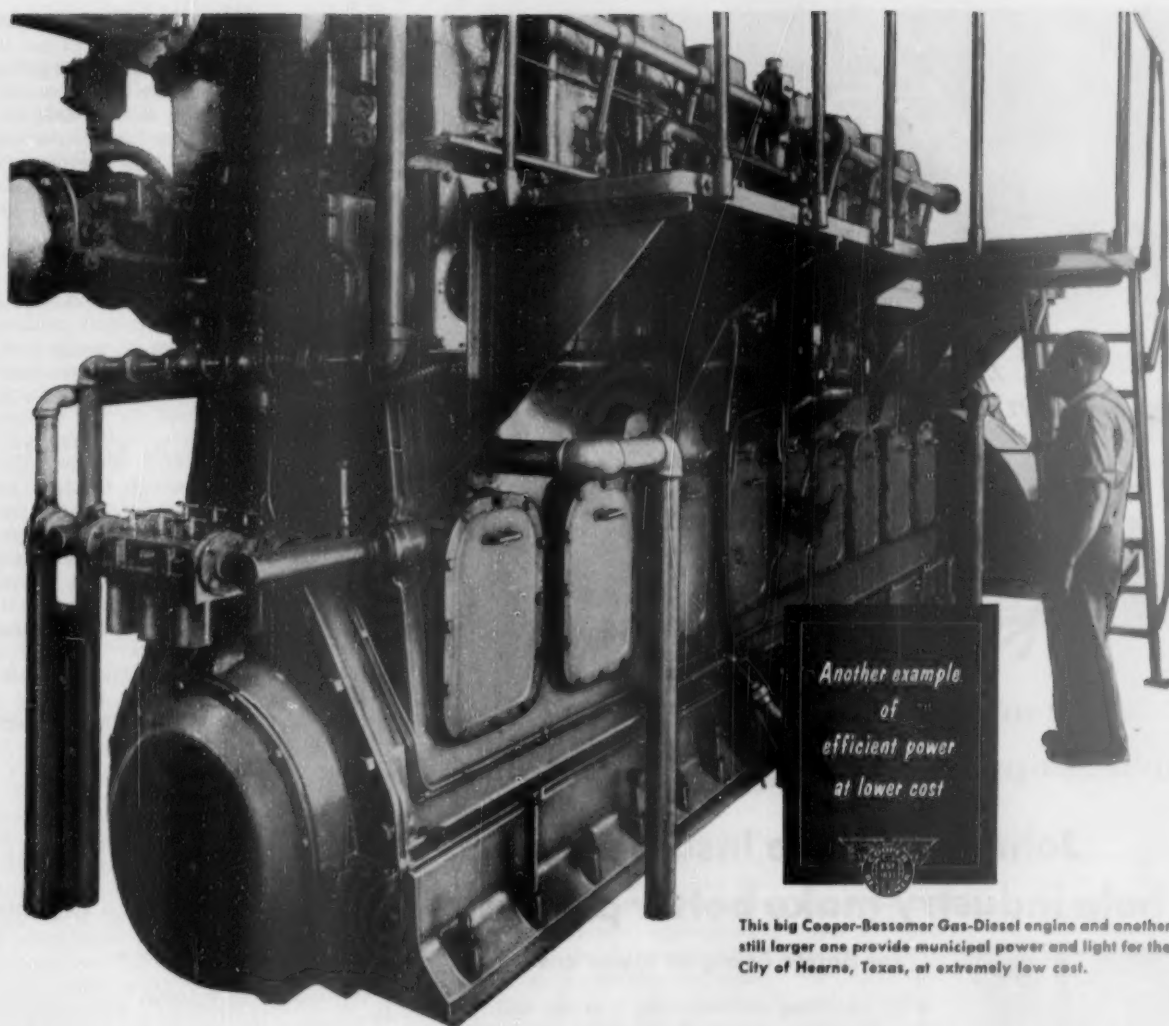
Open minds are needed in approaching matters such as this in the field of broadcasting and television. Business and industry, through sponsorship of programs of this nature, render a fine public service and win the respect of the people, and it helps sell products as well. . . .

EDGAR KOBAR

CHAIRMAN
FREEDOM OF INFORMATION COM-
MITTEE NATIONAL ASSN. OF RADIO
& TELEVISION BROADCASTERS
NEW YORK, N. Y.

Dear Sir:

Your editorial praised the dignity of Alcoa in sponsoring the "controversial" program of E. R. Murrow. Such praise, I think, was misplaced. Further, it is my firm purpose to buy no dignified Alcoa aluminum, however little, as long



Another example
of
efficient power
at lower cost

This big Cooper-Bessemer Gas-Diesel engine and another still larger one provide municipal power and light for the City of Hearne, Texas, at extremely low cost.

How this DIESEL takes a city SWIMMING and GOLFING!

THE citizens of Hearne, Texas, know what it means to have their own municipal power plant, powered by modern Cooper-Bessemer Gas-Diesel engines, running almost entirely on natural gas at the highest efficiencies known today.

While giving them power and light at normal rates, this combination actually produces 64% of the city's total revenue and is responsible for low property taxes. *In addition*, the plant's revenue has largely defrayed the cost of a 92-acre park, a golf course, fully equipped club house and a big swimming pool with bath house, to say nothing of absorbing the cost of lighting schools and streets.

Quite a break for the people of Hearne? Sure, but today it's common where wise city planning can team up gas fuel with modern Gas-Diesel engines. Cooper-Bessemer developed and introduced Gas-Diesels only a few years ago . . . and they were money

savers right from the start. Since then there have been constant improvements for ever greater benefits and economies.

It's pretty good evidence that regardless of your heavy-duty power needs, stationary, mobile or marine, it will pay you to check on the *new* things being done by one of America's *oldest* engine builders.

Mount Vernon, Ohio

COOPER-BESSEMER

Grove City, Pa.

New York • Chicago • Washington • San Francisco • Los Angeles •
San Diego • Houston • Dallas • Odessa • Tampa • Groggton •
Seattle • Tulsa • St. Louis • Gloucester • New Orleans • Shreveport
Cooper-Bessemer of Canada, Ltd., Halifax, N. S.

DIESELS • GAS ENGINES • GAS-DIESELS • ENGINE-DRIVEN AND MOTOR-DRIVEN COMPRESSORS • HIGH PRESSURE LIQUID PUMPS



Johns-Manville Insulations help industry make better products

for better living at lower cost

● By controlling and conserving heat and cold, J-M Insulations help produce the products and comforts which contribute to our better way of life. They serve industry in manufacturing metal products, from the handy ice-cream scoop to the steel for our automobiles . . . in freezing and preserving food for our tables . . . in generating electricity to light our homes and to produce the materials for our everyday needs.

Johns-Manville Insulations are scientifically engineered to the job. Experienced J-M Insulation Engineers serve industry by specifying the right J-M materials for every industrial temperature from 400F below zero to 3000F above.

Experienced J-M Insulation Contractors apply materials according to proved Johns-Manville methods. This combination of skilled men and scientific insulation saves American industry a billion dollars in fuel every year. For more information write Johns-Manville, Box 60, New York 16, N. Y. In Canada, 199 Bay Street, Toronto 1, Ontario.

For 95 years industry has looked to
Johns-Manville to solve its insulation problems

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Johns-Manville
INSULATIONS

SERVE YOU—BY SERVING INDUSTRY

as any part of the money I spend might go to support E. R. Murrow.

Murrow may dislike and disapprove McCarthy if he desires. He does not need to let his feeling distort, disfigure, and undignify his reporting. Reporting I can pay for. Ridicule and dishonesty I cannot. . . .

J. F. O'MAHONEY, JR.
INDIANAPOLIS, IND.

Dear Sir:

. . . About the only reason that I can think of that a business concern advertises in any form of media is to create goodwill and thus sell its product. Certainly Edward R. Murrow is not creating goodwill for his sponsor when he smears Sen. McCarthy, who is about the only U. S. senator today who has courage enough to stand up and fight the Communists. I think that the Aluminum Co. of America is committing two mistakes in sponsoring Murrow. First, it is building ill will among a substantial segment of its market, and second, it is aiding Murrow who isn't fighting Communism but is doing what he can to belittle those who are. . . .

GEORGE E. STRINGFELLOW
EAST ORANGE, N. J.

Dear Sir:

. . . This is an excellent statement on a problem of major importance to the broadcasting industry and to the American public. . . .

DONALD E. BROWN
ASSOCIATE PROFESSOR
SCHOOL OF JOURNALISM &
COMMUNICATIONS
UNIVERSITY OF ILLINOIS
URBANA, ILL.

Penney Pay

Dear Sir:

. . . In your . . . story on 1953 compensation paid to executives [BW—May 22 '54, p70], under the heading "Retail Chains," there is an error in connection with . . . our company officers and directors.

The first listing in the article records J. C. Penney, founder and chairman of the board, as receiving a salary of \$103,446. . . . He has received no compensation whatsoever from the company since 1934. Although he is chairman of the board, he devotes his time largely to interests other than company management problems.

The information concerning compensation paid George E. Mack, executive vice-president, is also somewhat in error. He received compensation of \$103,446, which included a salary of \$10,000. The remaining amount of the \$103,446 represents the amount paid under our compensation plan. The \$8,381 is the company's contribution to

his retirement fund. The \$13,094 has no connection with his earnings whatsoever; it represents a possible figure for pension after retirement.

No officer, director or any other person in our company receives a salary of more than \$10,000 per annum. All other compensation is paid under our basic company compensation plan. . . .

RALPH BROWN

EXECUTIVE DEPT.
J. C. PENNEY CO., INC.
NEW YORK, N. Y.

• We shouldn't have been wrong this year—we've reported correctly on the same situation in previous years.

Advertising Disclaimer

Dear Sir:

Your article, *Battle of the Toothpaste Additives* [BW—May 22 '54, p41], brought to the mind of the writer the text on the carton containing a tube of Co-op Toothpaste, recently purchased at a local consumers' cooperative.

In comparison with the claims made by highly advertised brands, it is magnificent in its understatement:

"The best insurance for sound teeth is: (1) proper diet with plenty of milk, fresh fruits and vegetables; (2) regular visits to your dentist; (3) thorough brushing after every meal. Thorough brushing cleans the teeth—often no dentifrice at all is required. Or an effective and inexpensive dentifrice such as precipitated chalk or a mixture of table salt and baking soda can be used. Many users prefer a pleasant-tasting dentifrice, such as Co-op Toothpaste, which encourages regular brushing by both children and adults."

JOHN H. NISSEN

THOMAS MORTIMER CO.
PHILADELPHIA, PA.

City Management: Three Firsts

Dear Sir:

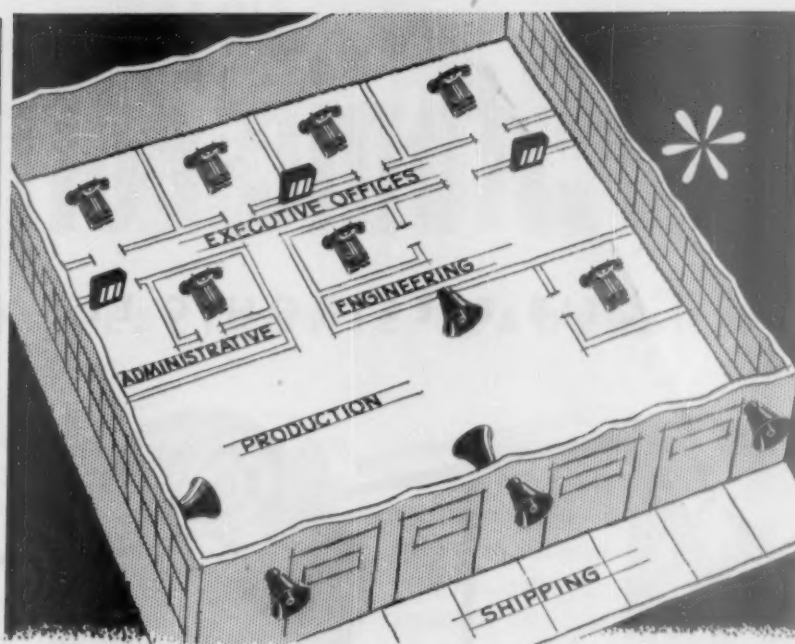
In your May 22 issue (p. 8), Mayor Grubert of Staunton, Va., is correct in telling you that Sumter, S. C., was not "the first city ever to hire a manager; the date: 1912." . . .

Mayor Grubert is incorrect in asserting that Staunton, in 1908, was the first city to "put into operation the city manager form of municipal government."

Galveston, in 1900, started the commission form (without a manager). Staunton, in 1908, was first to employ a city manager (without a commission) and Sumter in 1912 was first to put together the commission-manager form now called the council-manager plan.

RICHARD S. CHILDS

NATIONAL MUNICIPAL LEAGUE
NEW YORK, N. Y.



Let your *voice* run your errands . . . without paying a nickel to buy equipment

You can save valuable time, cut down on wasted man-hours, with a plant intercommunication system like the one shown above. And it needn't cost you a penny in capital expenditure.

Stromberg-Carlson's unique sound equipment leasing plan lets you enjoy the benefits of a complete paging, interphone, and music system, on the same low-cost basis business is already using to rent cars, trucks, business machines, etc.

Fitting your sound system is like

fitting a suit of clothes. No two offices or factories are built alike. That's why we recommend a free survey by an experienced Stromberg-Carlson engineer. Keeping an alert eye on costs, privacy, convenience, noise factors and traffic loads, the Stromberg-Carlson specialist comes up with the right analysis to give you a perfectly tailored system.

No cost, no obligation. Mail the coupon today for details of the lease plan and free survey offer.



INTERCOMMUNICATIONS for busy executives and department heads. Fast, efficient and private!



ATTRACTIVE SPEAKERS in work areas carry music, paging and announcements. You can locate anyone in seconds!



EVEN NOISY DEPARTMENTS are easily reached by these high-powered Stromberg-Carlson cone speakers.

Stromberg-Carlson® SOUND EQUIPMENT DIVISION

1202 Clifford Avenue, Rochester 21, N. Y.

Please send me more information on your plan for leasing intercommunication equipment.

Name.....

Firm.....

Street.....

City..... State.....

"Electronic Politeness"

OTIS ELECTRONIC ELEVATOR DOORS



that can't be matched

DRAMATIZE OTIS ELECTRONIC LEADERSHIP

The Otis Electronic Door is the crowning achievement in the field of the Operatorless Elevator. Its unmatched "electronic politeness" is available only with AUTOTRONIC elevators. The successful development of this door insured the ability of operatorless elevators to move great masses of people in busy buildings with the greatest degree of safety.



Only AUTOTRONIC elevators have car and hoistway doors with an *electronic zone of detection*. It is a proximity zone that extends in front of the leading edges of both

the car and hoistway doors up to shoulder height. Naturally, it is invisible to the passengers. (See phantom drawing at the left.)

No time is lost. The doors close promptly after each stop. If the *electronic zone* detects a person's presence, the doors politely reverse—even before they can touch the passenger. But if there is no chance of passenger interference, the doors continue to close without unnecessary car delay.

This *zone of detection* politely helps to prevent passengers from delaying the elevator, too. If a talkative passenger lingers overlong in the doorway, a buzzer sounds and the doors slowly, firmly—but politely nudge the passenger out of the doorway so the car can proceed on its way.

And most important from a building manager's viewpoint, this *zone of detection* is on duty all of the time the elevators are in opera-

tion. Its electronic reflexes never tire or slow down. It is a most vital point of AUTOTRONIC elevating. Its unmatched superiority makes possible uniformly fast, regular service in Otis automatic passenger elevators.



Otis AUTOTRONIC elevating saves up to \$7,000 a car, each year. It is suitable for office buildings, hotels, hospitals, banks, and department stores. Visit a new or modernized installation. Ask any of our 268 offices for details.

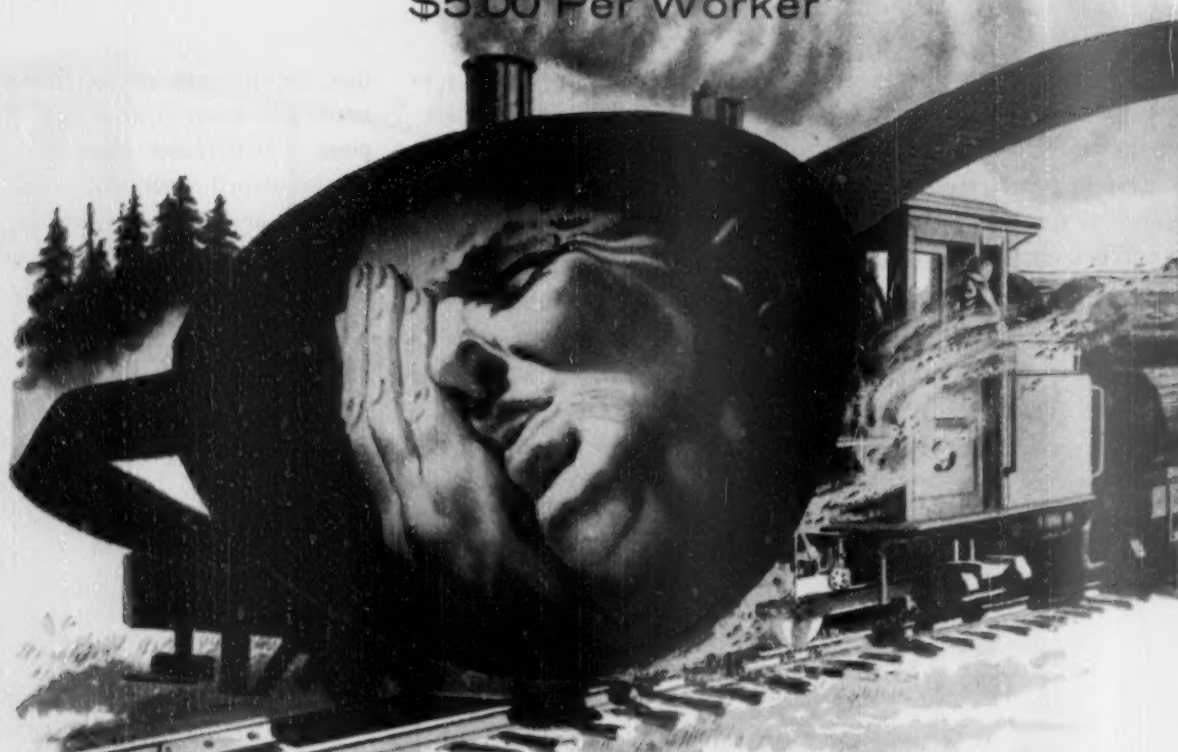
• • •

Otis Elevator Company
260 11th Ave., New York 1, N. Y.



COMPLETELY AUTOMATIC
AUTOTRONIC®
ELEVATORING

We've been saying
 "Eye Accidents Cost More than
 \$5.00 Per Worker"



Here's One that Cost \$4800 PLUS!*

Claimant was a fireman on a locomotive used to haul wood in a company logging area. Sand blew into his eyes while he was leaning out of the cab in the course of his work. Despite operations and extensive treatment, complete blindness set in. An award was made of \$12. per week for 400 weeks and \$6. per week thereafter.

Very few industrial eye accidents are as serious and as costly. But there are MORE of the less serious injuries, which makes overall costs higher. Are *you* protected? You are if you operate an AO Eye Protection

Program. Such a program can not only cut eye accident compensation costs materially but can save idle machine charges.** What's more, you'll lower your insurance costs (they reflect your accident rates), and protect the *quality* of your production because skilled workers do a better job than substitutes.

Write American Optical Company, 416 Vision Park, Southbridge, Mass. for booklet. Or ask an AO Safety Representative to call with facts and figures . . . do it to-day.

**According to the National Society for the Prevention of Blindness, 98% of eye accidents can be prevented when workers wear safety goggles.

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SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES



Keep your workers in the Safety Zone with American Optical Safety Equipment.

*In compensation alone

BUSINESS OUTLOOK

BUSINESS WEEK

JUNE 12, 1954

A BUSINESS WEEK

SERVICE

Business indicators are just as mixed as you would expect them to be in any breath-catching period.

This provided an auspicious time for Dr. Arthur Burns to hold his first press conference since becoming chief of the President's Council of Economic Advisers (page 33) for at least two reasons:

- There were enough favorable omens to back his moderate optimism.
- His cheerfulness should help bring an upturn if one is at hand.

Plummeting prices in Wall Street were, perhaps, a discordant coincidence for Dr. Burns. The stock market has lost caste as a forecaster, but its sourest day in four years chilled sentiment a bit just the same.

Business supports almost any point of view at the moment.

Construction goes on setting records (and finally is bettering its margin over a year ago), but the level of business spending on new plant and equipment apparently is lagging behind expectations.

Steel continues its slow gains, but auto sales are a little slower.

Employment, over all, is a trifle higher and unemployment a little lower. Yet the number of jobs in manufacturing declined again in May.

Contract awards for new construction began, a good many weeks ago, to indicate that building was on its way. Now the results are coming in.

Value of work put in place on all types of construction during May was pushed up almost to \$3.1-billion. Not only is this the best figure ever recorded for the month; it also is more than 4% ahead of a year ago.

This improvement in the rate of gain, if it holds, is the important thing. The plus margin, early this spring, had virtually melted away.

Home building, like construction generally, seems to be improving its comparisons with a year ago. Work on privately financed dwelling units in May was worth \$1,064-million. That's about \$50-million ahead of May, 1953—the first really good gain so far in 1954.

Business confidence has been the mainstay in keeping recession mild. Yet this confidence, measured in dollars spent rather than in public statements, may have been less robust than we thought.

That, at least, is the feeling you get from lower-than-expected outlays on new plant and equipment in the first quarter (page 33).

It might be noted, too, that future programs have been sliced a little.

There's little mystery about the patterns of business spending.

Almost invariably, since the war, business has budgeted its plant-and-equipment expenditures—and then exceeded the budget. This is second nature when new business, present and prospective, inundates you.

But, for nearly a year, the flood of new orders has been ebbing. The canny course has been to slow up on expansion and modernization.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

JUNE 12, 1954

When you look at the prospects for capital expenditures—whether in terms of bricks and mortar, machine tools and fork trucks, or display cases and delivery vans—just remember this:

Business spending on capital equipment will follow the curve of activity. The effect of an upturn this autumn could be but one thing.

—●—

Business improvement has still to show itself in the labor market.

Employment went up, to be sure, between April and May. And unemployment went down (though not by enough to shout about).

These betterments, however, were in farming. Nonfarm jobs dipped.

Factory operations appeared to level off (or even pick up a little in May), but it remains for June job figures to reflect the turn in output.

Up to the date of the May nose count, employment in manufacturing continued downward—200,000 jobs lost in a month, 1½-million in a year.

Watch the June figures on the labor force when they come out, about a month from now, because they'll stir up a fuss.

The nut of the matter probably will be an upturn in factory employment. But unemployment will get the headlines. Youngsters, out of school, have swelled the work force—with jobs still hard to find.

Pollyanna-fashion, you might say that 1954's best feature employment-wise is that it hasn't been any worse.

Thanks to outdoor work, mainly on farms, jobs are up about 1.4-million from January. (Then they were 59.7-million, now 61.1-million.)

As the weather opened up, most of those laid off in manufacturing went into building or agriculture (or bumped somebody else out of doors). This cut more than 400,000 off the 3.7-million March jobless peak.

Washington finds 3-million-plus unemployment too high to live with.

Not only does the figure sound bad, but the pinch results in local pressures that can't be ignored in an election year.

"Substantial labor surplus" now exists in 51 major areas against 16 a year ago; and such a surplus afflicts 58 smaller areas against 18.

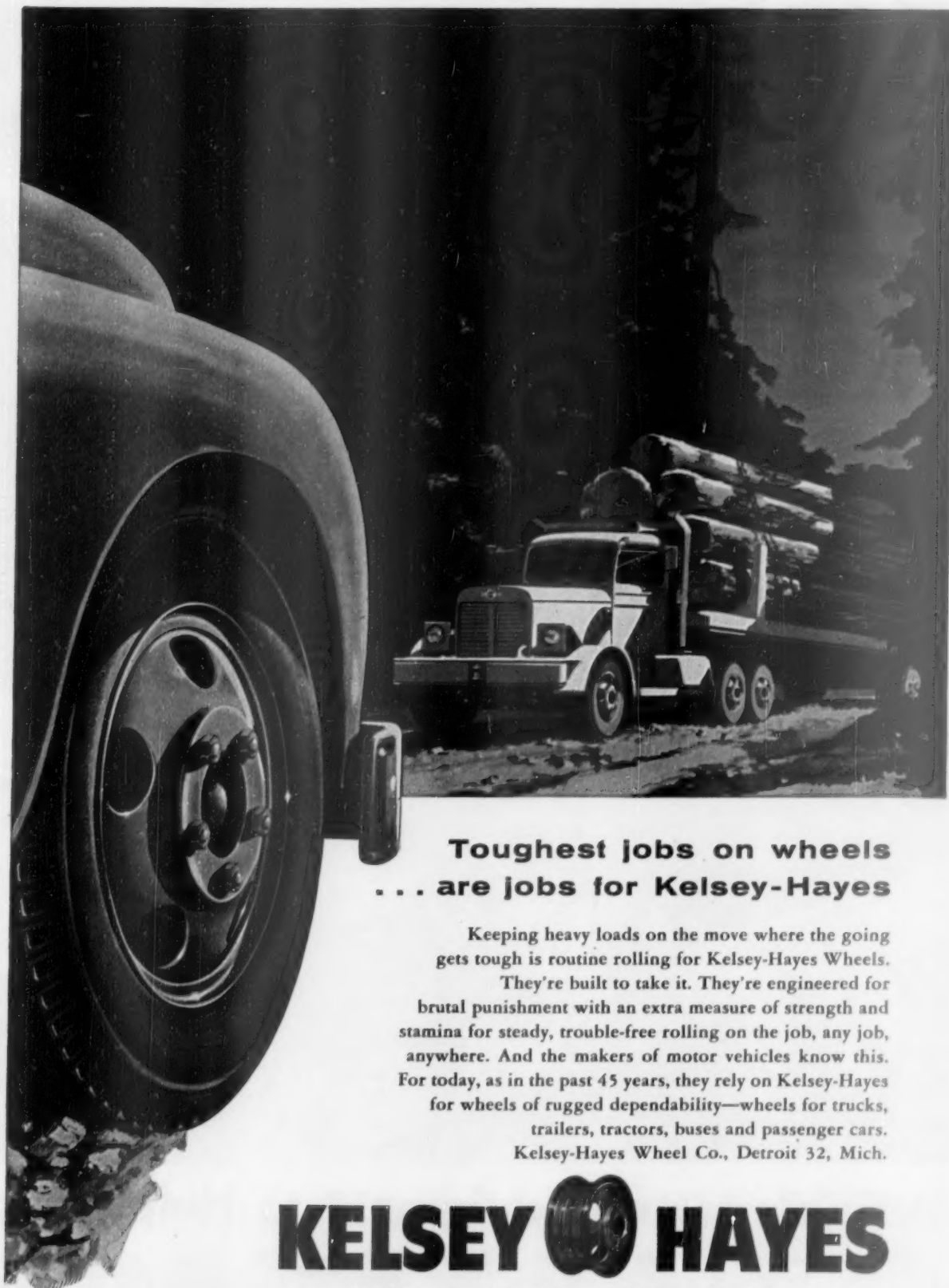
Cities sometimes are willing to be placed in Group IV—areas of substantial labor surplus—despite unhappy connotations because of the potential federal aid that attaches to the tag.

Heretofore, any area with more than a 6% labor surplus went into Group IV; now, however, that class has been subdivided:

Group IV-A means a surplus between 6% and 12%; in Group IV-B, available workers total more than 12% of the labor force.

—●—

Watch this talk about factory "discounts" on new cars. Gossip takes in more than just the slow-moving models. This raises misgivings of the peak sales season ending before Memorial Day rather than Labor Day.



**Toughest jobs on wheels
... are jobs for Kelsey-Hayes**

Keeping heavy loads on the move where the going gets tough is routine rolling for Kelsey-Hayes Wheels.

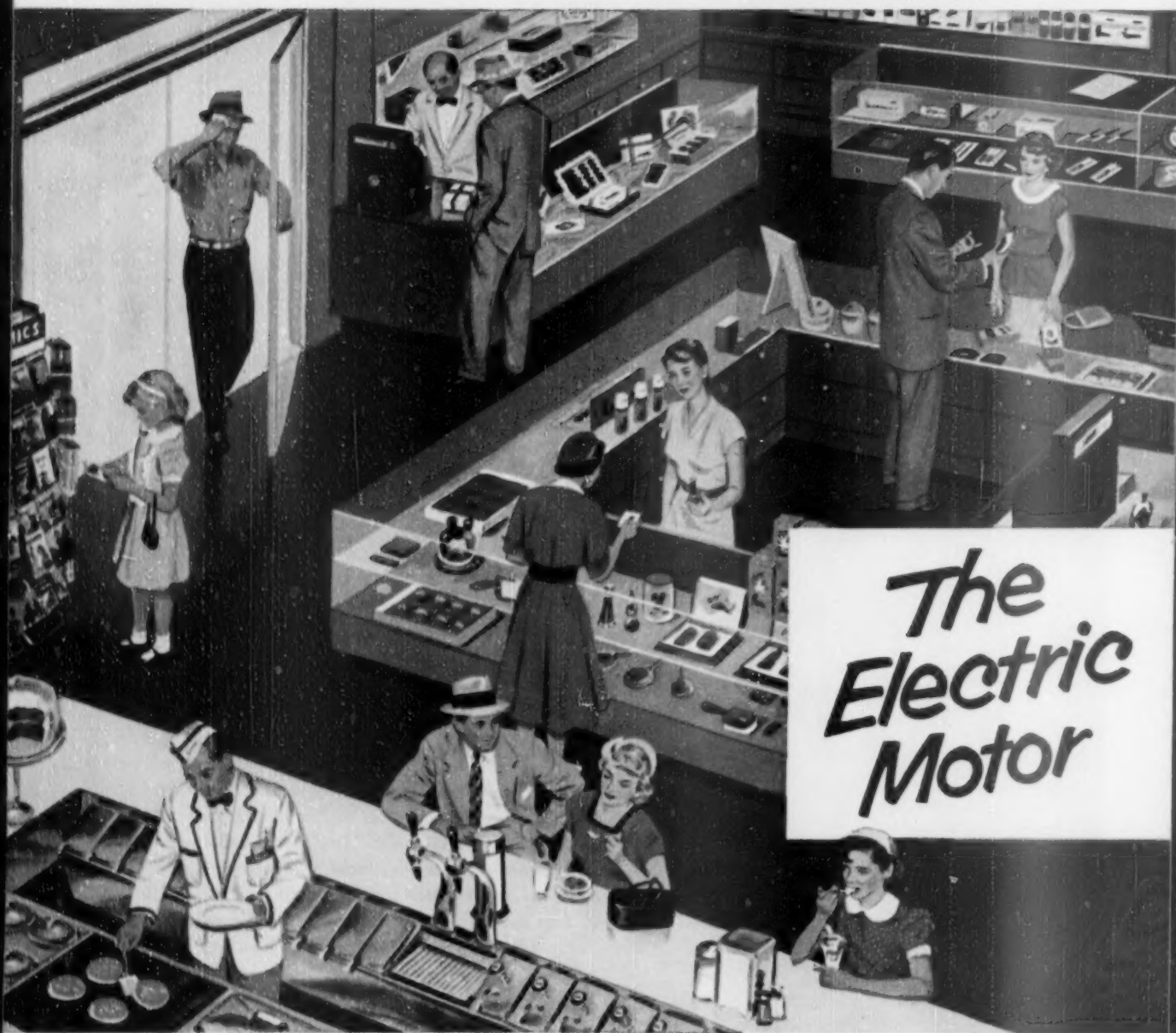
They're built to take it. They're engineered for brutal punishment with an extra measure of strength and stamina for steady, trouble-free rolling on the job, any job, anywhere. And the makers of motor vehicles know this. For today, as in the past 45 years, they rely on Kelsey-Hayes for wheels of rugged dependability—wheels for trucks, trailers, tractors, buses and passenger cars. Kelsey-Hayes Wheel Co., Detroit 32, Mich.

KELSEY  HAYES

World's Largest Producer of Automotive Wheels

Wheels, Brakes, Hubs, Brake Drums, Special Parts for all Industry • 9 Plants—Detroit and Jackson, Mich. . . .
McKeesport, Pa. . . . Los Angeles . . . Windsor, Ont., Canada . . . Davenport, Ia. (French & Hecht Farm Implement and Wheel Div).

It helps bring you everything even the air-



The Electric Motor

Machinery and Equipment to Help People

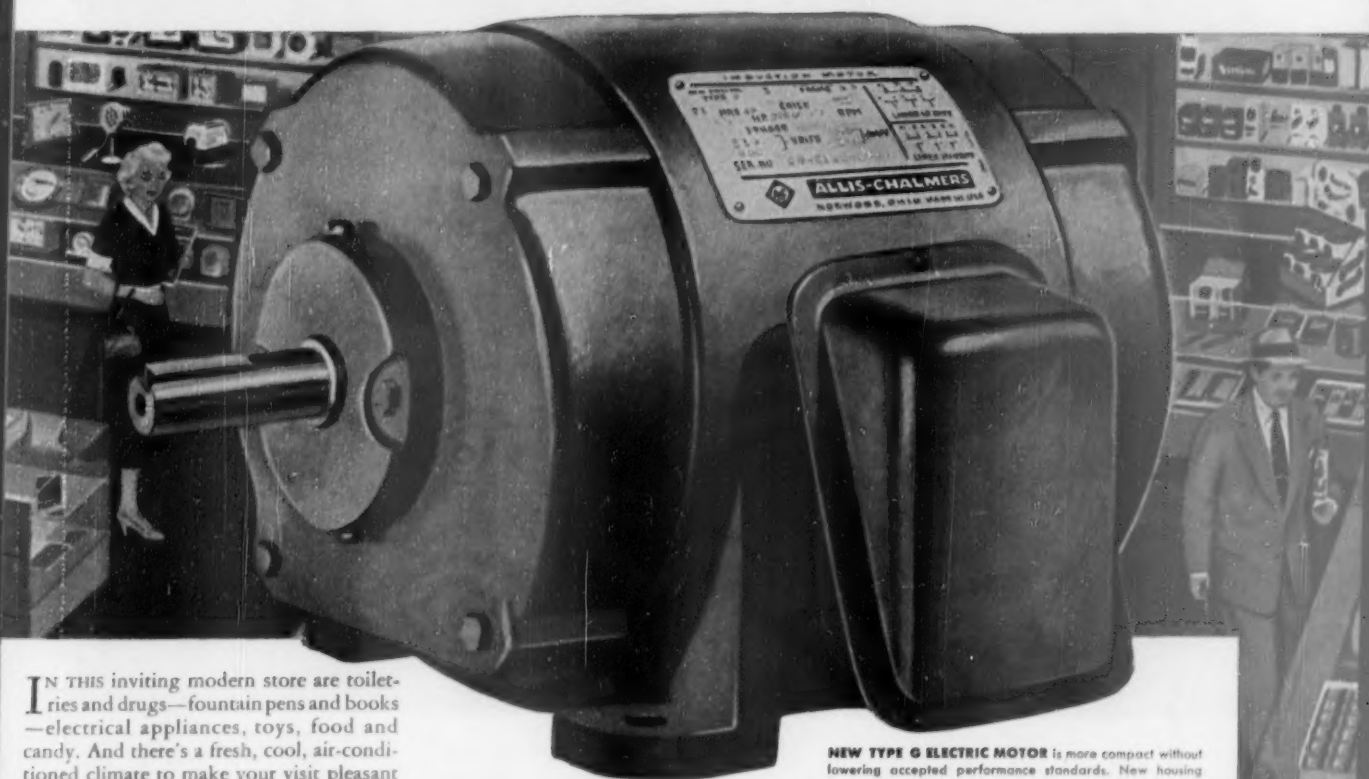


LIGHT FOR
FREEDOM
•
POWER FOR
PROGRESS

ALLIS-CH

GENERAL MACHINERY DIVISION

Everything in this store — air-conditioned comfort!



IN THIS inviting modern store are toiletries and drugs—fountain pens and books—electrical appliances, toys, food and candy. And there's a fresh, cool, air-conditioned climate to make your visit pleasant and comfortable.

Where does the electric motor fit in this picture?

Electric motors furnish the power for the store's air-conditioning system. And just about every item in the store comes to you in greater quantity, better in quality and at a lower price because electric motors

helped make it, process it, package it or deliver it.

The new Allis-Chalmers electric motor shown here is the "workhorse of industry." It operates fans, pumps, compressors and production machinery of almost every kind.

NEW TYPE G ELECTRIC MOTOR is more compact without lowering accepted performance standards. New housing provides greatly improved physical protection.

Allis-Chalmers has pioneered in the development of the electric motor . . . as it has with turbines, generators, transformers and other electrical equipment which provide industry with power to make more things—at lower prices for everyone.



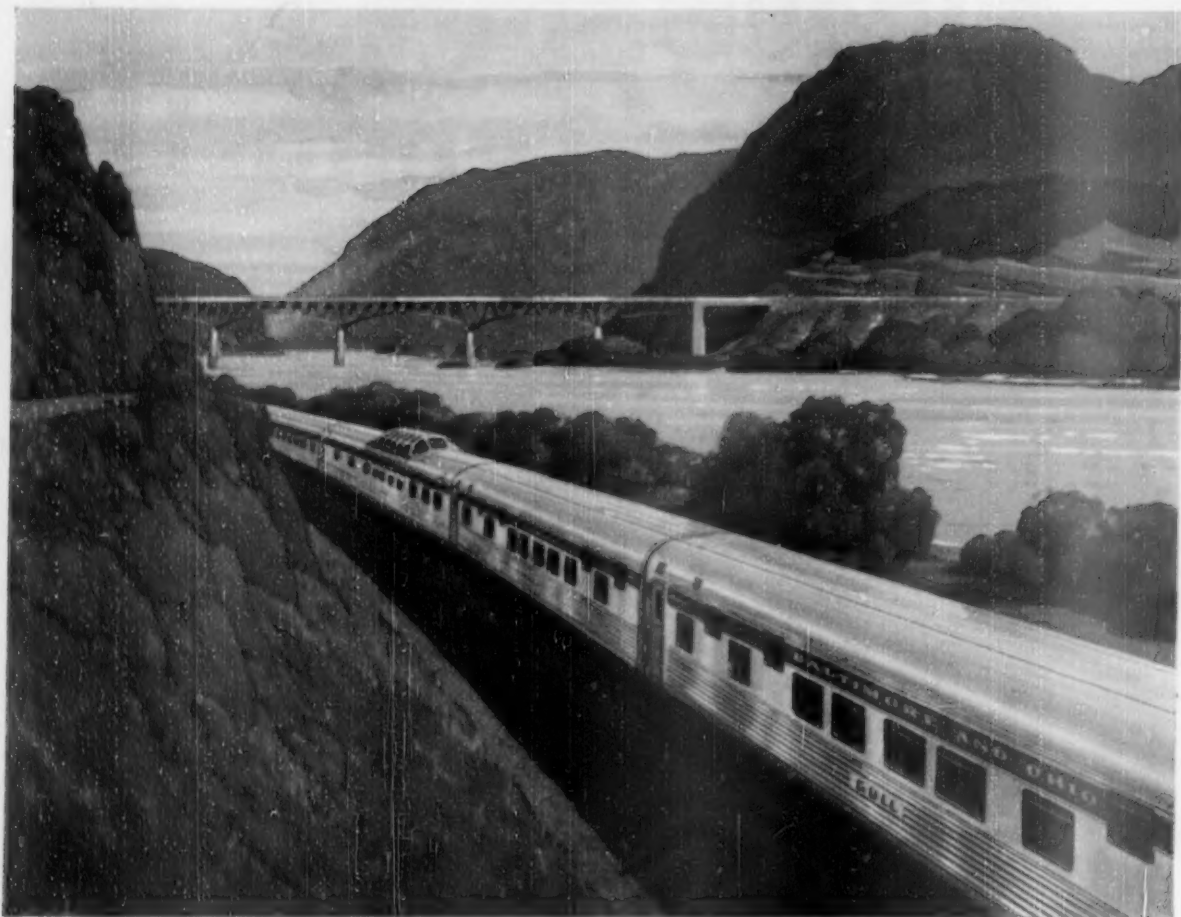
Produce More—Have More—LIVE BETTER!

ALLIS-CHALMERS



C-5637A

PLANTS IN: MILWAUKEE, WIS.—PITTSBURGH, PA.—NORWOOD, OHIO—BOSTON, MASS.—TERRE HAUTE, IND.—MONTREAL, P. Q.—ST. THOMAS, ONT.



MORE REASONS TO GO ON THE B & O Among the many railroads which are placing new equipment in their crack trains, to make them even more inviting, comfortable and safe, is the Baltimore and Ohio Railroad.

We have recently delivered to the B & O a group of duplex roomette-bedroom cars built of stainless steel. You can enjoy their quiet, smooth ride, their all-round luxury on such famous trains as the Capitol Limited, the National Limited and the Diplomat.

While providing the newest for long-distance travelers, the B & O has also brought greatly improved service to commuters in Pittsburgh, Washington and Baltimore with Budd self-propelled RDC rail diesel cars.

The B & O typifies the new philosophy of railroading, which recognizes that when you provide attractive equipment and fine service, people prefer to ride in trains.

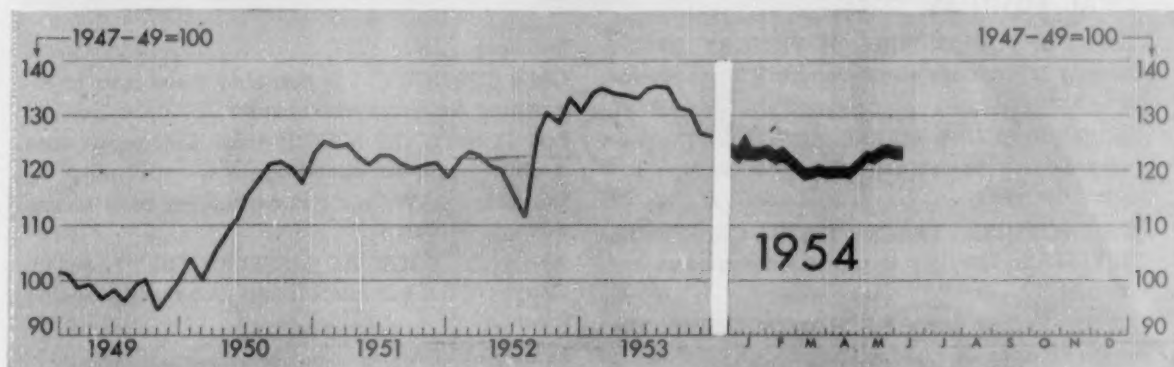
The Budd Company, Philadelphia, Detroit, Gary.

Automobile and Truck Bodies and Wheels, Railway Passenger Cars

Budd

PIONEERS IN BETTER TRANSPORTATION

FIGURES OF THE WEEK



Business Week Index (above) [§]124.2 †124.3 123.3 131.2 1946 Average 91.6

PRODUCTION

Steel ingot production (thousands of tons).....	1,740	†1,674	1,690	2,208	1,281
Production of automobiles and trucks.....	120,606	†148,744	154,640	134,619	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$49,949	\$50,755	\$55,295	\$49,255	\$17,083
Electric power output (millions of kilowatt-hours).....	8,246	8,433	8,438	8,096	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,466	6,431	6,422	6,409	4,751
Bituminous coal production (daily average, thousands of tons).....	1,196	1,192	1,113	1,606	1,745
Paperboard production (tons).....	223,307	241,709	237,514	233,423	167,269

TRADE

Carloadings: manufactures, misc., and l.o.l. (daily av., thousands of cars).....	68	68	67	75	82
Carloadings: raw materials (daily av., thousands of cars).....	47	46	41	56	53
Department store sales (change from same week of preceding year).....	+8%	-5%	-2%	none	+30%
Business failures (Dun and Bradstreet, number).....	218	206	206	217	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	437.0	436.7	434.1	415.5	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	87.9	87.2	86.5	86.8	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	101.2	101.9	101.3	89.1	††75.4
Print cloth (spot and nearby, yd.).....	19.2¢	19.2¢	19.1¢	21.2¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100).....	140.9	140.8	140.8	136.3	††76.4
Scrap steel composite (Iron Age, ton).....	\$28.25	\$28.58	\$27.58	\$39.87	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	30.000¢	30.000¢	30.000¢	29.985¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.26	\$2.41	\$2.45	\$2.21	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	34.33¢	†34.40¢	34.47¢	33.12¢	30.56¢
Wool tops (Boston, lb.).....	\$2.12	\$2.12	\$2.12	\$2.12	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	228.3	231.5	227.1	189.4	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.50%	3.49%	3.47%	3.83%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	14-14%	14-14%	14-14%	22%	1-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	53,930	†54,358	54,047	53,708	††45,820
Total loans and investments, reporting member banks.....	80,519	†80,502	79,893	75,981	††72,036
Commercial and agricultural loans, reporting member banks.....	21,599	21,854	22,145	22,690	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	33,196	†33,041	32,377	29,144	††49,879
Total federal reserve credit outstanding.....	25,582	25,490	25,274	25,418	23,883

MONTHLY FIGURES OF THE WEEK

		Latest Month	Preceding Month	Year Ago	1946 Average
Private expenditures for new construction (in millions).....	May.....	\$2,090	\$1,930	\$2,013	\$803
Public expenditures for new construction (in millions).....	May.....	\$992	\$878	\$947	\$197
Employment (in millions).....	May.....	x61.1	x60.6	61.7	55.2
Unemployment (in millions).....	May.....	x3.3	x3.5	1.3	2.3
Wholesale prices (U. S. BLS, 1947-49 = 100).....	May.....	110.9	111.0	109.8	78.7
Wholesalers' inventories (seasonally adjusted, in millions).....	April.....	\$11,635	\$11,754	\$11,445	\$5,489
Retailers' inventories (seasonally adjusted, in millions).....	April.....	\$22,686	\$22,563	\$22,387	\$9,791

° Preliminary, week ended June 9, 1954.

† Revised.
†† Estimate.

x New Series. Not comparable with previous data.
§ Date for "Latest Week" on each series on request.

in BUSINESS this WEEK . . .

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TAX REVISION: BOOST FOR INVESTMENT. The Senate Finance Committee's version is headed for

the floor p. 32

GM's CURTICE . . . is choosing these men in re-vamping his management team. . . . p. 33

BUT IT MAY YET MATCH 1953. SEC report sees a drop in capital spending. . . . p. 33

HOUSING LAW. It's getting tougher as it moves through Congress p. 34

ANOTHER LOOK AT DISTRIBUTION. Twentieth Century Fund will make a two-year study stressing function p. 34

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TROUBLE COOKING UP FOR PERON. Labor and management problems are threatening Argentina p. 160

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STORE BUILDING SPREE. They're having a fight to expand in Knoxville. . . . p. 73

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STILL WOBBLY. The AFL and CIO agreement fosters only temporary optimism p. 166

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NAMES & FACES:

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THE PROSPECTS CONTINUE DARK. The rail analysts on Wall Street foresee a bad year for the roads. . . p. 128

RACING FOR THE POT OF URANIUM. Security dealers in Utah are alarmed at the frenzied rate of share trading. . . . p. 130

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INDUSTRY AND ARMY BATTLE FOR GRADS. Campaign speeches in June are not enough. . . . p. 43

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LETTING THE PARENT GET WORD IN, TOO. Owens-Illinois Glass feels its divisions have had the spotlight too long p. 48

PRODUCTION:

CLEANING UP THE WATER SUPPLY. Here's how one waste treatment plant answers the problem. . . p. 78

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SHIPPING NESTED FUEL TANKS. Royal Jet, Inc., finds waste space can be useful p. 82

THE MAN WHO TELLS THE ENGINEERS ABOUT PLASTICS. His guiding hand helps to sell these new materials. . . . p. 84

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The 'copters are coming —

and thanks, in part, to nickel they're stronger and safer than ever

The coming new and improved commercial helicopters won't be two- or three-seaters. They'll be big birds, transport-size. Big, strong, rugged, safe! — thanks to the design and production "know-how" of their makers and to their wide-spread use of nickel alloy steels.

Take the rotor hubs on the big, transport type of helicopters for example.

An engineer's nightmare, these hubs are subject to terrific stresses, extreme fatigue, severe shock loads.

So, as in most of all the forged parts on this giant whirlybird, including the vital blades themselves, the designers make use of a rugged alloy steel containing nickel.

Or take the major working parts of this helicopter's engines — crankshaft, cams, gears. In these, too, there can be no maybe about the metal used. For the sake of safety and dependability, it's a heat-treated nickel alloy steel.

In 'copters, as in fixed-wing airplanes, Inco nickel's role is an invis-

ble one. Its identity is lost when it is alloyed with other metals to give them strength, toughness, or other special properties.

Yours for the asking... Draw on Inco's fund of useful information on the properties, treatment, fabrication and performance of alloys containing nickel.

Write for — "List A" of available publications.



THE INTERNATIONAL NICKEL COMPANY, INC. 71 WALL STREET
NEW YORK 5, N. Y.

You'd like to have more salesmen like him



...and you can



He's the top man on your sales force. The last to complain that selling is tough, he's the first to need a new order book.

These days you wish you had more men like him. And that's where Long Distance telephone service can help you—and help him, too.

Long Distance multiplies any valuable salesman. It helps him to keep in close, regular touch with his present customers. Gives him more time to develop new accounts. Helps him cover more territory in fewer days. Sets up

appointments that often save hours of wasted waiting time.

In short, it makes the most productive use of salesmanship. You can prove it profitably in your own business.

Long Distance doesn't cost—it pays.

We have some specific suggestions for the profitable use of Long Distance in Sales, Purchasing, Administration, Traffic, Production, Engineering and Accounting. A call to your Bell Telephone Business Office will bring a representative to discuss them with you.

LONG DISTANCE RATES ARE LOW

Here are some examples:

New York to Philadelphia . .	50¢
St. Louis to Indianapolis . . .	85¢
Cleveland to Chicago	\$1.00
New Orleans to Houston . .	\$1.05
New York to Los Angeles . .	\$2.50

These are the daytime Station-to-Station rates for the first three minutes. They do not include the new, lower federal excise tax.

Save time—Call by Number

BELL TELEPHONE SYSTEM





ROBERT R. YOUNG, SURE OF VICTORY, IS . . .

Planning to Remake the Central

This week, in the quiet seclusion of his home at Newport, R. I., financier Robert R. Young waited for the decision in his battle for the New York Central RR.

Young is supremely confident that he has won control of the railroad—even though the long, bitter, and much-headlined proxy battle has not yet been decided officially. Election inspectors this week were still worrying over the votes cast May 26 by the Central's shareholders. And William White, president of the railroad and the man whose forces Young is trying to oust (BW-Mar.6'54,p.26), was by no means ready to concede. There were hints that White and his men might take the matter to court if the election results (expected next week) give the official victory to Young.

Still, Young was so sure of victory that he was ready this week to spell out his plans for the Central. They are plans that would affect not only the

New York Central but also—quite possibly—the entire railroad industry.

• **New President**—Young has made it his first order of business to pick a new president for the railroad. White has announced that he will tear up his contract if Young wins.

Young says, "Mr. White is the only New York Central employee to eliminate himself from future employment by the company."

Young's choice as successor is Alfred E. Perlman, 51-year-old executive vice-president of the Denver & Rio Grande RR. Perlman has agreed to accept the job. As if to show how confident he is of taking over the Central, Young this week called a meeting of his 14-member board of directors to introduce them to Perlman. The meeting will be held next Monday in New York. That is the day on which the election inspectors will announce the official count of stockholders' votes.

• **Perlman**—The man whom Young's

directors will meet on Monday impresses Young as a man of vast energy and inventive mind. He is also a man with abundant railroading experience—though he has never coped with such passenger problems as the Central has. Perlman has pioneered in many fields of railroad modernization. On the D&RG, for instance, he has established an ambitious basic research department and a two-way radio system for the operating department. He is exactly the kind of man Young wants to run the New York Central. Young will recommend to his hand-picked board of directors that Perlman be given White's job.

As Young sees it, this is the situation Perlman will face:

Walking into the job, Perlman will have few ties—and certainly no obligations—to Eastern railroads. This will have both drawbacks and advantages. His actions will be viewed critically and perhaps suspiciously by neighboring railroads. On the other hand, he will

be making a fresh start—a position that many executives might envy.

He will be able to expect friendly cooperation from the Chesapeake & Ohio Ry., which Young controlled until recently; and from the New York, New Haven & Hartford RR, controlled by Patrick B. McGinnis—a close friend of Young. Perhaps Perlman's biggest asset will be his taking office with an entirely new board of directors behind him.

• **Men**—Perlman will be allowed to pick his own team of executives. It is anybody's guess who, if any, of Perlman's present associates will move to the Central with him. It is also anybody's guess who of the railroad's present management will resign if and when Young's forces take over.

Young has made it clear that he does not intend to sweep the Central's present executives out, wholesale. "There are scores of excellent men in the Central," he says. "Their loyalty to the shareholders of the property is the first measure that will be made. The next measure will be one of ability. Whether they like or dislike me personally is of little or no concern."

But regardless of the mood of Central executives, and regardless of how many men Perlman decides to take East with him, there are many Young-trained executives whose faces are likely to appear in the Central offices. Among these men are Thomas J. Deegan, Jr., head of Young's Federation for Railway Progress (management-labor-public group that Young founded as a rival to the Assn. of American Railroads); William C. MacMillen, president of Chesapeake Industries (holding company controlled by Young); Clifford H. Ramsdell and Douglas Bogart, who worked with Young's Alleghany Corp. through the midst of the proxy fight. All these men are disciples of Young and his philosophy.

The indoctrination of nondisciples will be one of Perlman's first tasks as he takes over the Central. Young undoubtedly will egg him into going at the task with vigor. "Every serious mistake I have made," he says, "can be traced to my leniency and soft heart. Well, from here on, I am going to profit by those mistakes."

I. The Railroad

Once firmly in the saddle, Young will lose no time in getting his plans for the Central under way. He will continue those parts of White's program that he thinks are worth salvaging, and he will scrap the rest.

He thinks White's team has gone too far in curtailing passenger services. He is also unhappy about the particular plan White announced for "piggy-back" service—continuous truck-rail haulage, in which the truck-trailer is

loaded right onto the train. And he views White's entire program as not comprehensive enough to make the Central a thoroughly modern transportation system in a short enough period of time.

• **Passengers**—One of the Central's worst problems is a running loss of money from the passenger operation. The success or failure of a Young management may hinge on its ability to do something about this. Young plans to study the problem intensively—with special attention to the New York City commuter service. Admittedly, he still doesn't have the answers.

He plans an early meeting with his friend McGinnis of the New Haven, which is bothered by the same trouble. The two will try to work with New York City transportation officials, develop some sort of long-range plan.

Young figures that many of the cost problems involved in passenger service will be solved in large part by his old dream of an over-all modernization program—a program that he still talks about in spite of the Central's \$1-billion long-term debt and shortage of cash. This program would include lighter rolling equipment, more automatic operations. The cost problems will also be partly solved, Young feels, if railroads serving the same cities cooperate more closely. This cooperation has been a Young goal for 10 years.

Young may also make some big changes in the railroad's real estate picture—especially with regard to Grand Central Terminal, giant passenger station that the railroad owns in mid-Manhattan. What happens to Grand Central will depend on what comes out of Young's studies of the commuter service.

• **Headquarters**—The future of Grand Central will decide, to a certain extent, whether the Central's headquarters under Young stay in New York. At one time, Young hoped that the Chesapeake & Ohio would take over the Central as soon as the Central came under his control. He figured then that the Central's headquarters would move to Cleveland, to consolidate with the C&O's.

The C&O is no longer controlled by Young, so the incentive to consolidate the two headquarters is gone. But Young still ponders the advantages of a head office located nearer to the center of the country. It's possible that the Central's offices may move to an inland city within two years after Young's forces take over.

Young's love of central location is tied up with his dream of a transcontinental railway system. He looks forward to a consolidation of services by railroads stretching across the country.

As Young sees it, the dream could

come true through the combined efforts of the New York Central, the Rock Island, and the Southern Pacific.

• **Finances**—Young is convinced that the improvements he plans for the Central—costly as they will be—will soon pay for themselves by the savings they bring about. He believes shareholders will start to benefit financially from his control a year after he takes over. And he says the yearly dividend per share will be \$7 to \$10 within 10 years—a claim that he pounded into stockholders during the proxy battle.

He plans to offer these benefits to Central employees early in his administration—by offering them stock. He will also start a stock option plan for the executives. He hopes that these and other programs will make the Central family a happy one.

II. The Industry

Young has long been an ardent campaigner for cooperative, industry-wide improvements in equipment and methods. Several times in the past, he has approached the Assn. of American Railroads and tried to sell its members on his ambitious program. Each time, AAR turned him down.

He now plans to put the proposal to AAR once more. If the association turns him down this time, he will play his trump card: He will take the New York Central out of AAR—lock, stock, and barrel. He is sure that the Central won't lose AAR's services that way; as he sees it, the association will be forced to function for the Central on a pay basis—rendering such services as return of cars from other roads.

And Young will not stop there. He will have the Central go ahead on its own modernization program—involving radical designs for passenger equipment—either by itself or in cooperation with other railroads that are interested. But in striking out on his own, Young will be sure to let stockholders of other railroads know what the Central is doing—by renewing his famous advertisements beginning "Memo to . . ."

• **Federation**—Another move Young will recommend to his board will be that of affiliating the Central with the Federation for Railway Progress. This organization was founded by Young in 1947 (BW-Mar.1'47,p21), with the announced intention of becoming the railroad industry's spokesman and of taking over a large number of AAR's functions.

The federation has never aroused much enthusiasm in the rail industry. Its only members now are the C&O and the Central of Georgia. But with the New York Central as a member, Young thinks it could gain new stature. And it may be the focal point of industry research as envisioned by Young.

Warren's Court Makes History

These Were the Big Decisions This Year

ANTITRUST

Baseball

Professional baseball is a "sport" outside the antitrust laws.

Construction

Construction industry is not so "local" in nature as to be outside the pale of the antitrust laws.

Machinery leasing

Upheld monopoly decision and orders to break up shoe machinery market control.

Movies

Proof of "parallel business behavior" by eight leading film producers in denying first-run pictures to a suburban theater is not proof of a Sherman Act conspiracy.

CIVIL RIGHTS

Censorship

State censorship boards may not ban a movie on grounds that it is immoral or that it tends to promote crime.

Segregation

In a historic decision, the court overthrew "separate but equal" doctrine in public schools, and in effect banned enforced racial segregation in all tax-supported facilities and places.

Search and seizure

Upheld conviction of a gambler even though state law enforcement agents "broke" into his home twice to install microphones and used the intercepted conversations between him and his wife as evidence.

Forced confession

Reversed murder conviction on grounds several confessions were "coerced" as result of interview with a psychiatrist.

STATE TAXES

Natural gas

Struck down as an unconstitutional burden on interstate commerce a Texas tax on natural gas transported out of the state by over 100 pipeline companies to 38 other states.

Airplanes

Upheld constitutionality of Nebraska property tax on planes that land and take off in the state on interstate flights.

FEDERAL REGULATION

Minimum wage

Minimum wages included in government contract bids are not a guaranteed wage ceiling for employers.

Giveaway programs

Federal Communications Commission cannot ban radio and TV giveaway programs as lotteries.

Mail subsidy

Civil Aeronautics Board must offset profits earned on domestic mail routes against the subsidy needed to support a line's international route.

Water rights

State-granted water-use rights remain valid and compensable under Federal Power Act.

LABOR

Disparaging product

An employer may fire pickets who publicly disparage his product, if their message fails to mention a labor dispute.

Picketing

An employer cannot sue in a state court to stop picketing by a union, because federal labor law is paramount over state labor law where both forbid the same thing.

Union rules

Taft-Hartley forbids discrimination by employers between union and nonunion workers, where the employer is acting under pressure of a union to enforce union rules.

The Supreme Court closed its term this week under a Republican chief justice—the first justice named to the court by a Republican President in 22 years. The court wrote itself into the history books with a unanimous decision declaring that state-enforced racial segregation is unconstitutional, and into the law books with a number of other rulings. Some of the most important are summed up in this table.

The anti-segregation decision, striking at the heart of legal doctrines that have for years supported a segregated relationship of the races, far outweighs in significance anything else the court acted on this term. Yet the less historic decisions that the court, as a co-equal branch of the federal government, is constantly pouring out have meaning far beyond the particular cases involved.

In effect, the court's final say on legislation passed by Congress and the interpretation of the Constitution frequently puts it in the position of "writing law." Decisions handed down this week underscore this axiom.

• **Extending Federal Power**—By a 5-to-3 majority, the justices this week voted to expand the authority of the federal government in regulation of natural gas prices. Their decision in the Phillips Petroleum Co. case brings under federal regulation about 2,300 independent natural gas producers and gatherers who heretofore have not been under the Federal Power Commission. FPC itself, back in 1951, said it did not have the authority to set the prices charged by companies—such as Phillips—that sell their gas to interstate pipelines, which in turn carry the gas into other states for resale to consumers.

But the Supreme Court majority upheld a lower court ruling that the Federal Power Act of 1938 does apply to Phillips. The majority opinion, written by Justice Sherman Minton, held that the act exempts from FPC regulation the "production and gathering" of gas, but its terms do apply to the sale in interstate commerce of natural gas for resale.

Justice Tom Clark (from oil-and-gas-conscious Texas), Harold Burton, and William O. Douglas were the three dissenters.

• **Labor Law**—In a second case, the court split 6-to-2 on whether employers may collect money damages in a state court for conduct by a union that could have been taken to the National Labor Relations Board as an unfair labor practice. Justice Burton, who wrote the majority opinion, held

that no conflict between federal and state regulation of labor disputes is created by awarding damages.

Burton conceded that state courts may not issue injunctions against union practices outlawed by federal labor law (see table), since this creates a conflict of remedies between state and federal agencies. But he held that Taft-Hartley neither afforded adequate relief for damages suffered by the employer nor denied an employer's right to collect damages from a union.

Justice Douglas (with Black) again dissented.

• **Lobbying**—Chief Justice Earl Warren spoke for the 5-to-3 majority in another case, upholding the constitutionality of the federal Lobbying Act. The law passed in 1946 requires (1) registration of lobbyists and (2) filing of financial reports by persons spending or receiving money to influence "directly or indirectly" any legislation.

The law provides for fines and jail terms and bars a convicted violator from acting as a lobbyist for three years. A lower court ruled it was too vague.

Chief Justice Warren reversed that ruling, brushed aside objections that the law violates the constitutional right to petition the government, and ruled the law can be applied to those who collect, solicit, or receive money principally for influencing legislation. Warren limited the act's application to efforts at "direct communication with members of Congress."

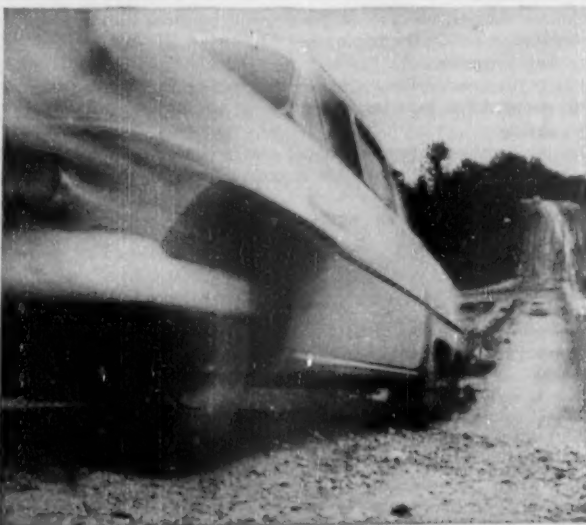
Justices Douglas (a third time), Black, and Jackson dissented. Jackson and Douglas complained that Warren, in effect, was rewriting the law in order to find it constitutional.

• **Pulling Together**—These differences point up the tough task faced by Warren, like Vinson before him, in keeping personal prejudices and intracourt alliances from causing a plethora of split decisions, 5-to-4 majorities, separate concurring or dissenting opinions. Yet this term seemed to bring a few more unanimous or near-unanimous decisions than in recent times, with the most controversial case of all—school segregation—decided by a 9-to-0 count.

The segregation case made a heavy impact on the court's whole term. Though the total number of cases (around 800) on the docket was substantially the same as last year, this year fewer written decisions were made, more cases were turned down without arguments.

Obviously, Warren's first year has been too short to make a significant difference in the court's decisions. He has found himself in the minority only a few times, however, and then usually along with the "liberal" members, Douglas and Black. Douglas, on the other hand, is fast becoming a "great dissenter."

ROUND THE CLOCK Chrysler cars rough it over the company's new Proving Ground near Chelsea, Mich. On the high-speed oval above, cars whiz around at better than 100



UP the hills—here a 20% grade—driver tries to see how fast a model can make it.



AROUND

New Torture Track Tests Careening Chryslers

The cars in these pictures are trying to make liars out of the engineers. Chances are they won't. While the cars go up and over and around various tests on the auto industry's newest and largest outdoor torture wrack—Chrysler Corp.'s engineering Proving Ground near Chelsea, Mich., to be dedicated next week—the engineers can feel pretty certain of the results.

• **Newest Version**—But that's what a proving ground is for—to determine by exhaustive tests just how much of a particular kind of punishment a car can stand. From the thousands of miles of testing already done at the Proving Ground—on test roads that duplicate actual road conditions—the engineers know just about when the wheel on the station wagon will break, how high the car would have to leap to snap a spring, how long and how fast a car can run around the high-speed oval without harm.

Chrysler's Proving Ground covers a sweep of 4,000 acres and 45 mi. of roads, with high-speed curves so scientifically calibrated that a car will round them at 100 mph. with the driver's hands off the wheel. It is the industry's most elaborate effort to date, although it is not entirely completed yet.

General Motors' proving ground at Milford, Mich., the first in the industry, is at the moment better-equipped, although somewhat smaller. Ford's

testing ground is compactly set up near its Dearborn factories. American Motors has a proving ground in Wisconsin, Packard one at Utica, Mich. And all manufacturers test cars on public highways.

• **Through the Mill**—Chrysler tests its cars in three cycles of 6,000 mi. each. One cycle is 6,000 mi. around the high-speed oval—4.7 mi. of concrete, six lanes wide, with curves banked so that a car can do up to 140 mph. Another cycle is 6,000 mi. around the 10½-mi. "endurance road"—a rough two-lane, gravel-topped road with segments paved with Belgian blocks (a part of Ford's endurance road duplicates a particularly body-twisting railroad grade crossing in Dearborn).

The third 6,000-mi. cycle puts a car through a "mud bath" where water sprays constantly keep a dirt road gooey. Cars then go through a water trough, onto an open highway span, and up and down hills at the Proving Ground. They range from a 7% to a 32% grade—a 32-ft. rise every 100 ft. (Grades at GM's proving ground range from 7% to 27%, except for a supersteep 60% grade on the military test run.)

A cycle run continues day and night, with stops only for service and change of drivers.

GM, for instance, averages around 40,000 mi. of driving a day at its proving ground.

mph. This is one of three 6,000-mi. doses of torture.



the turns in a station wagon he tests what it takes to break a wheel.



OVER the bumps he gets the answer on shock absorbers and suspension setup.



INTO the lab is final step. Engineer tests wheel.

Tax Revision: Boost for Investment

● The Senate Finance Committee version of the big tax reform bill goes along with the Administration philosophy of relief for business.

● Generally, it liberalizes the provisions of bill adopted earlier by the House.

● There's still a chance, though, that the Democrats will rebel when the measure reaches the Senate floor.

The Senate Finance Committee put the finishing touches this week on something of a miracle—a long list of changes in a House-approved tax revision bill, which gives something to almost every business, and takes away practically nothing. Basically, it hews to President Eisenhower's plan for using tax revision to stimulate business investment.

The Senate itself may change this happy picture when the voting starts in a couple of weeks. But the committee is bringing 30 days of hearings to a close with recommendations to change many things in the House version that businessmen did not like.

Business did not get everything it asked. It was disappointed on a wide range of decisions from pay-as-you-go collection of corporation taxes, to faster tax depreciation on secondhand machinery. But as the committee version stands, it is markedly more favorable to business than the bill adopted in the House.

• **Placid Opposition**—Even committee Democrats accepted most of the decisions without an all-out fight. They mustered only four votes against tax relief on divided income—the most hotly disputed recommendation.

Perhaps the Democrats laid back as a matter of strategy, saving their opposition for the limelight of a full-dress debate on the Senate floor. The party's liberal wing is almost certain to oppose relief for dividend income. Easier depreciation rules may be attacked, too.

But this group can't muster more than 20 votes, as things look now. Their attacks won't add up to much except campaign material—unless they are joined by the party's conservative wing under Sen. Walter George, who earlier showed signs of leading the Democratic opposition. George sat quietly through the Finance Committee sessions. If he finally decides to lead a floor fight then the final bill could differ widely from the committee version.

George may take his plan for a \$20 deduction for every taxpayer to the floor. He proposed this in committee,

and lost. He has never formally withdrawn another suggestion—that personal income tax exemptions be raised from \$600 to \$700 next year, and to \$800 the following year. Both of these ideas are a part of Democratic strategy to pass out more tax relief for individuals, and less for business. Since raising the issue, however, George has intimated that all such schemes might have to be shelved, due to the Southeast Asia crisis.

Here are the major differences between the House bill and the committee recommendations:

Depreciation. Spokesmen for business applauded the House bill's declining balance method of figuring depreciation, which is designed to allow bigger deductions in the early years of life of plant and equipment. The Senate committee approved the general principle but substituted so-called "sum of the digits" formula that in some ways is more liberal than the method the House adopted. The House said fast write-off could be applied only to that part of new construction completed after Dec. 31, 1953. The Senate changed this to any job completed after Dec. 31, no matter when it was started.

A strong effort was also made to apply fast write-off to secondhand buildings, machinery, and equipment. On this, the committee said no, agreeing with the House.

Dividend relief. The committee approved, and slightly extended, the House plan by which 6-million stockholders could deduct something like \$250-million this year, and an annual \$850-million thereafter. This would come via (1) a \$50 exemption plus a 5% credit on the remainder of 1954 dividend income, and (2) thereafter a \$100 exemption plus a 10% credit. The committee extended these benefits to owners of stock in fire, casualty, title, and marine insurance companies, which had been specifically excluded by the House. Stock life insurance companies and mutuals of all kinds remain beyond the pale of both versions.

Undistributed surpluses. The House shifted the burden of proof to the

Internal Revenue Service to show that surpluses were being held back to avoid taxes—a marked liberalization of the long-time interpretation of the hotly-disputed Section 102. The Senate committee agreed. The House also said the penalty taxes should not apply to the first \$30,000 of retained surpluses. The committee raised this to \$60,000.

Pay-as-you-go. Business groups fought hard but vainly to get the committee to drop this Administration-sponsored idea altogether. The House said all corporations with a tax liability above \$50,000 would have to start payments next September and December on income earned the same year. This would have involved some 35,000 companies. The Senate raised the qualifying figure to \$100,000, dropping the number of affected companies to about 25,000. However, it still covers almost 90% of corporation taxes.

Depletion allowances. The committee rejected an effort to lower allowances on income from oil, gas, and sulfur production. Then the House went one better, and increased allowances for 27 minerals important to national defense, including nickel, mica, chromite, asbestos, fluorspar, mercury, and bauxite.

Corporate reorganization. The committee voted to go back to existing laws governing tax-free reorganization. The House bill sets up a new set of rules distinguishing between a publicly held and a privately held corporation. This appeared too complicated to the committee. Tax lawyers and accountants had opposed the House version on the same grounds. The committee also voted to reject House changes in the rules governing liquidations.

Pension and profit-sharing plans. The House voted a complex set of new rules about qualifications for preferential tax treatment. The committee favored going back to the law as now on the books.

Preferred stock bail-out. The House voted in favor of an 85% penalty tax in an effort to plug this loophole, by which closely held corporations are able to redeem special preferred stock issues in a way that allows the owner to pay a capital gains tax. The committee favors a provision to make the owner of the redeemed stock pay straight income taxes on profits. Complaints poured into the committee that the House version would apply to all preferred stock redemptions, whether issued for tax avoidance or not.

Foreign income credit. The committee knocked out a House provision that would grant a 14-point tax rate reduction on income of U.S. corporations earned abroad.

GM's Curtice . . .

. . . is revamping his top team. Kyes returns as vice-president, member of Operations Policy Committee.

After about 18 months in the top spot at General Motors Corp., President Harlow H. Curtice has started to pull his own management team together.

This week, GM named Roger M. Kyes, Ivan L. Wiles, and Thomas H. Keating members of the board and of the Operations Policy Committee. In addition Kyes—until last month Deputy Defense Secretary—was made a member of the administration committee and group vice-president in charge of the Dayton and Household Appliance divisions and the GMC Truck & Coach Division—which was split off from the car and truck group because Kyes formerly headed GMC. This stills rumors that Kyes would (1) become president of Electric Auto-Lite Co. (page 44), or (2) take over Willys Motors.

These are the first major executive changes in GM since Curtice became president in February, 1953, following the resignation of Wilson to become Secretary of Defense. Detroit observers see the re-hiring of Kyes and greater responsibilities for Wiles and Keating as portending further changes. These are the signposts:

- Retirement of two vice-presidents—Harry J. Klingler in July, and executive vice-president Ronald K. Evans in August. Klingler is vice-president for the car and truck group; reporting to Evans are the Engine group, Dayton and Household Appliance groups, and Overseas & Canadian group.

- Attainment of retirement age next year of Edward R. Godfrey, whom Kyes succeeds as head of the Dayton and Household Appliance groups.

- Placing of Wiles and Keating on the Operations Policy Committee. Wiles is a corporation vice-president and general manager of Buick; Keating is a corporation vice-president and general manager of Chevrolet.

GM people carefully point out that it is not required that the corporation have any given number of executive vice-presidents—or vice-presidents, for that matter (Curtice's old job of executive vice-president in charge of the general staff has never been filled). But it still is true that GM practice is to have a group vice-president, and that Klingler's spot will be vacated next month. This could be one meaning of the upping of Wiles and Keating to the important Policy Committee. Group vice-presidents normally are members.

It has been reported around Detroit that both Keating and Wiles were due to move up in the GM hierarchy because of the outstanding jobs they have done with their car divisions. In addition,

a "youth movement" has been under way in Chevrolet for some time, possibly indicating that the company is laying a foundation for a younger division manager.

Capital Spending: Still Tapering

Plant and Equipment Expenditures

Billions of Dollars, annual rates, seasonally adjusted

	1953		1954	
	Oct.-Dec.	Jan.-March	Apr.-June	July-Sept.
Manufacturing	\$12.22	\$11.87	\$11.42	\$11.02
Mining	1.10	.95	.98	1.04
Railroad	1.26	1.06	.86	.70
Transportation other than rail	1.52	1.47	1.27	1.30
Public utilities	4.46	4.29	4.44	4.53
Commercial and other . . .	8.00	7.84	7.98	8.20
Total	\$28.56	\$27.48	\$26.94	\$26.79

Data: Securities & Exchange Commission, Commerce Dept.

BUSINESS WEEK

But It May Yet Match 1953

SEC report forecasts capital spending drop for year, but Presidential adviser Burns thinks figures are outdated and too low, sees recovery forces winning.

The Securities & Exchange Commission and the Commerce Dept. issued a mildly sobering report this week on business plans to invest in new plant and equipment. It indicated a tapering off quarter by quarter (table above); and an estimated total drop of \$1.3-billion for 1954 compared to 1953, due mostly to a 7% slash for the year by manufacturers.

- **Challenge**—This figure was immediately questioned by Dr. Arthur F. Burns, chairman of the President's Council of Economic Advisers. He told a press conference—the first he has held in Washington—that investment might well come up to record-shattering 1953.

Burns fired back a consistently optimistic stream of answers to reporters who all but filled the same room used for Eisenhower's weekly press conferences.

- **Unemployment** might reach 4-million when the June influx of students is included with the labor force, but he does not think it will go as high as 4.5-million.

- **There are probably enough recovery forces already at work to offset the Administration's planned reduction in arms spending.**

- **Leading these recovery forces, in his opinion, are the high rate of construction contracts, the rise in orders received by factories beginning last February, and the number of companies that have recently revised upward their investment plans for the year.**

- **Conflict of Figures**—Burns suspects

the SEC report may be on the low side for manufacturers' investment plans, chiefly on the basis of two surveys that he believes contain more recent information.

One of these was the survey made by the McGraw-Hill Economics Dept. (BW-Apr.17'54,p104), which showed that manufacturers planned to equal 1953 investment. The other was an unpublished study made at Burns' request by the Business Advisory Council of the Dept. of Commerce. He said this one was more in line with McGraw-Hill findings than with the new SEC report.

- **Categories**—In addition to the 7% dip in the plans of manufacturers, SEC reported a slash of almost a third in the investment plans of railroads for the full year 1954. These two groups accounted for most of the slight tapering off of total investment plans since the first of the year. Declines have been continuous in both categories since mid-1953, and the SEC figures indicate further drops. Within the manufacturing category, chemicals, primary metals, and textiles plan modest reductions for the year as a whole.

In the cases of the utilities, mining, and commercial categories, dips earlier in the year have apparently leveled out.

Biggest single factor holding up SEC figures is a 50% rise by the auto industry. Paper, petroleum, electrical machinery, and food and beverages are either holding even, or show slight gains over 1953.

Housing Law . . .

. . . requested by the Administration, with liberal provisions, is moving fairly smoothly through Congress.

Congress is going to enact a tighter housing law than the Administration asked for early in the session. Partly because of the scandals that broke over the Federal Housing Administration in April, the legislators will whittle down some of the extra homebuilding aids and incentives that President Eisenhower requested.

But this whittling will be done with a fine knife, not an ax. The aids and incentives will not all disappear. When the legislation emerges from Congress, it will still be able to fulfill its original destiny—to bolster the homebuilding boom, which now points toward 1.2-million starts for 1954.

• **Journey**—The House of Representatives worked on the legislation before the April scandals broke, and granted the Administration's requests with only a few modifications. The Senate Banking Committee took the bill up during the hottest weeks of the scandals (BW—May 22 '54, p. 30) and made appropriate changes, which the Senate accepted and expanded.

The Senate committee and the Senate also made other changes in the House's bill—changes having no connection with the scandals. The bill now goes into a conference between House and Senate members. As it looks now, House and Senate already agree, or are likely to agree, on these features:

• **Increases in the maximum loans** FHA is allowed to insure for various types of apartment buildings. The House passed these increases; the Senate went along.

• **Increases in maximum loans for homes built for sale.** The present law says that a builder can borrow up to \$16,000 for a one- or two-family house; up to \$20,500 for a three-family house, and up to \$25,000 for a four-family house. The House voted to make these figures \$20,000, \$27,000, and \$35,000 respectively. The Senate cut the House's figures moderately—to \$18,000, \$24,000, and \$30,000. Observers do not expect a really fierce wrangle over this feature.

• **An increase in the maximum term of FHA-insured mortgages,** from 25 to 30 years.

• **Provisions designed to choke off the kinds of practices that led to the April scandals.** The Senate wrote in these provisions; observers foresee no objections by the House.

• **Disagreement**—There are also several

features of the legislation that may easily lead to some hot arguments between House and Senate:

• **Maximum loans for home improvement and repair.** Present law says FHA can insure such loans up to \$2,500 with terms up to three years. The House raised the limits to \$3,000 and five years, but the Senate voted to retain the present limits.

• **Terms for existing houses.** The House cut down-payment requirements for older homes to the same level as requirements for new houses. The Senate struck out this provision.

• **Public housing.** The President asked for authority to build 140,000 public housing units in four years. The House refused; the Senate voted to grant the request.

• **Down-payment requirements on new houses.** Present law on this subject is very complex. The House voted to substitute a fairly simple formula: A homeowner must make a down payment equaling 5% of the first \$10,000 plus 25% of anything over that. The Senate voted to substitute \$8,000 for the \$10,000 in the House's rule. This means a higher payment than the House wanted—though still a lower one than present law allows.

• **Scandals**—The provisions written into the legislation by the Senate to bar shady practices—the cause of the April scandals—cover two main fields of housing: (1) apartments and (2) home improvements and repairs.

Under the present law, it is possible for a builder to estimate the cost of a project at \$1-million, get an FHA-insured loan equaling 80% of the estimate—or \$800,000—and then build the project for an actual cost of \$800,000. He has not tied up any of his own capital. Furthermore, rents are set by FHA according to the \$1-million estimate.

The Senate provisions would require the builder to certify his actual costs. If they are lower than his estimate, he must return part of the loan immediately, to preserve the 80% value of the loan. And rents, under the Senate provisions, would be set according to actual cost rather than estimate.

To protect homeowners against fast-talking salesmen who—under present law—can make big profits on home improvement jobs, the Senate would shift responsibility onto banks and other lending institutions. These institutions would be charged with the job of seeing that homeowners are treated fairly.

Another Look at Distribution

Foundation maps new two-year study. This time the stress will be on function, not cost.

The Twentieth Century Fund is going to take another crack at one of the thorniest problems in economics, that of the cost of distribution.

Back in 1939, just before the second World War invalidated most of its data, the foundation took its first look at the subject with the publication of *Does Distribution Cost Too Much?* This book was a landmark in marketing history. For the first time, someone had attempted a comprehensive analysis of distribution costs, covering the subject from one end to the other.

• **Out of Date**—Though the book is still widely quoted—particularly as the source of the estimate that 59¢ out of every dollar spent by the consumer goes for distribution as against 41¢ for production costs—it is sadly out of date. Since 1939 there have been some revolutionary changes in distribution in the U.S., from the rise of the supermarket and self-service in retailing to the vast growth of consumer credit and shopping centers. So a total re-examination is in order.

The man it has retained to do the job is Reavis Cox, professor of marketing at the University of Pennsylvania's Wharton School of Finance & Commerce, widely known as an author and

consultant. Cox's task will be far more than merely to revise the earlier book. He's going to start from the ground up, take two years to do it.

Even the title will be different. It hasn't been set as yet, of course, but for purposes of identification, the foundation at this stage is calling the study "A Reappraisal of Distribution Function and Cost."

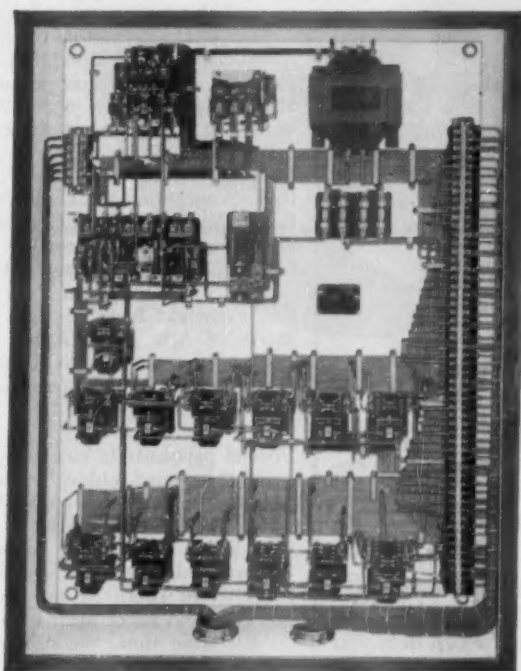
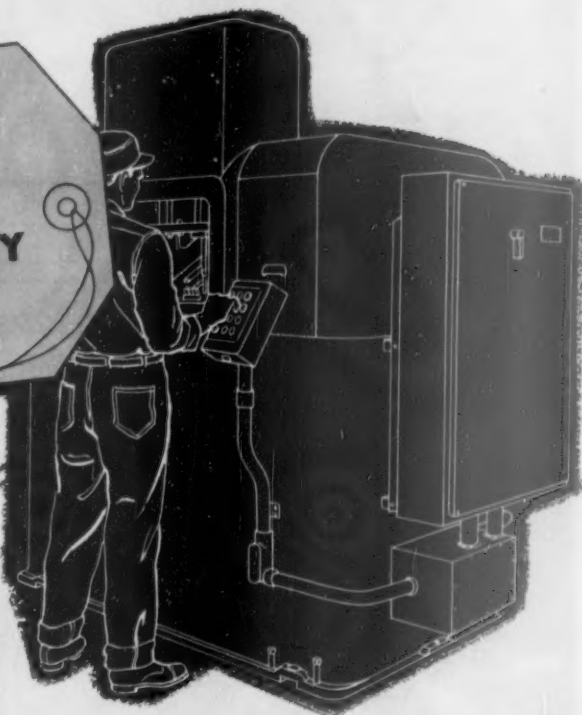
• **Function Stressed**—This time the emphasis is going to be on the function rather than the cost, which is a nice illustration of the change that has occurred between 1939 and 1954. This time the foundation is not going to try to isolate marketing cost as a separate element and then to compare it with production cost. It is paying heed to the conclusion of its original study, which said: "We can say with confidence that there is waste in distribution, but we cannot reduce it to a percentage figure—as a whole, or in any of its parts. Nor can we say that distribution is more or less wasteful than production."

This time the emphasis is going to be positive—on the relationship between mass production and mass distribution and on how both together have resulted in lower costs.

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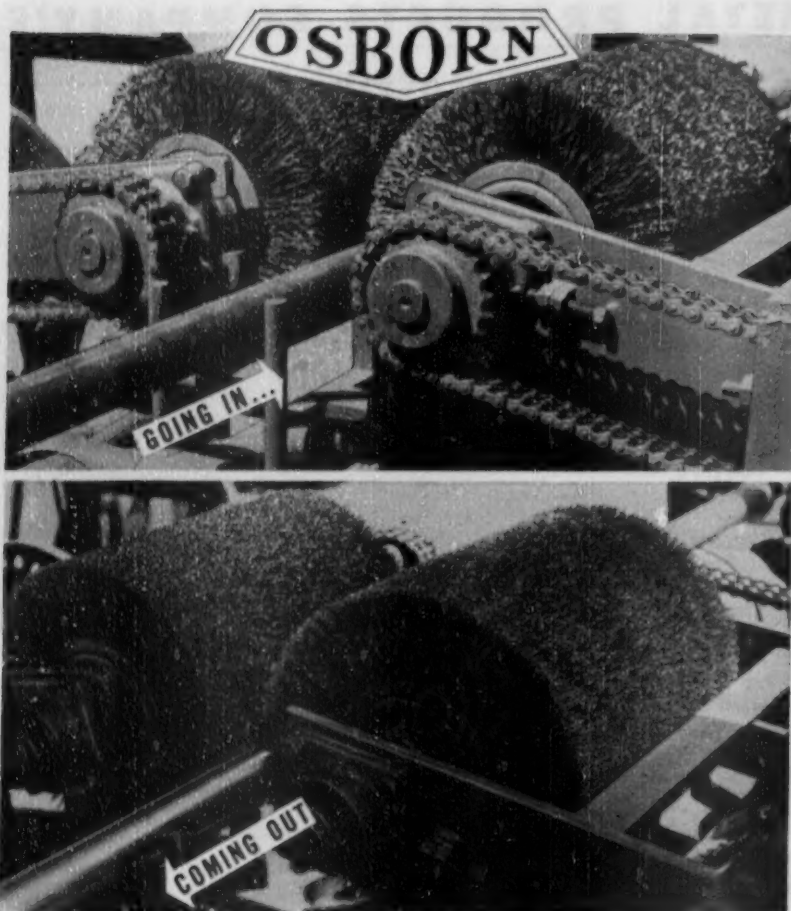
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BUSINESS BRIEFS

Building higher: The Commerce & Labor Depts. report jointly that U.S. new construction in May reached a record for the month of \$3.1-billion, 10% above April and 4% above the previous May. For the first five 1954 months, construction totaled \$13.2-billion—\$9.2-billion of it private money and \$4-billion from assorted governmental agencies. The total was 2% over the 1953 period, with public outlays showing the larger gains.

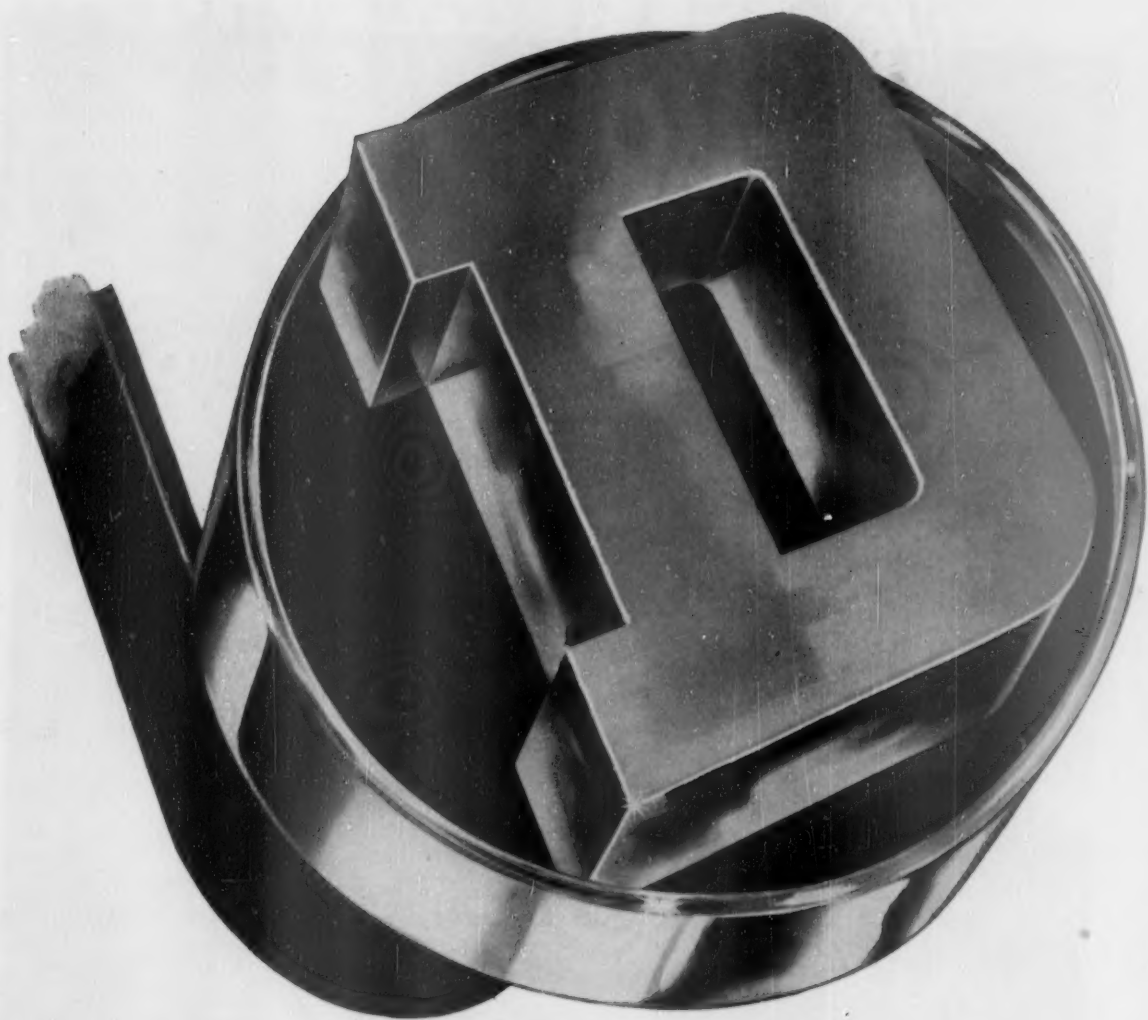
Aluminum expansion program of the government will skip its planned third round. Aluminum needs of aircraft makers are running below estimates, so the Office of Defense Mobilization figures it won't need the extra 215,000 tons of capacity that would have been provided by the third round.

Copper production capacity in the U.S. should show a net gain of 250,000 tons a year by 1956, according to E. S. Hann, treasurer of Kennecott Copper Corp. Hann told the Securities Analysts of San Francisco that his company—the world's largest producer—and other industry majors were all on the prowl for more copper capacity, and for other base metals.

Bank absorption: Stockholders of the San Francisco Bank will be asked this week to vote on a proposal to buy the Central Bank of Oakland (BW-Apr. 24'54,p74). The plan calls for the San Francisco Bank to issue 300,000 shares of new stock (it has 600,000 outstanding) for sale to Transamerica Corp., majority share owner in the Central Bank.

Federal payments to ease the plight of workers rendered jobless by the competition of imports are opposed by the Eisenhower Administration. Such a plan would discriminate against workers made idle by other causes, Under Secretary of Labor Arthur Larson told the House Ways & Means Committee. At the same time, the Administration urged Congress to extend the jobless insurance umbrella to cover 3.4-million workers in small companies, and 2.4-million federal employees.

A gas turbine provides the power for a new bus being tested by General Motors. It's the same 370-hp. engine as that in GM's experimental Firebird car (BW-Jan.16'54,p30). GM has no plans to produce the turbine bus, but is collecting data in the belief that the turbine will eventually make its working debut in heavy-duty commercial vehicles.



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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
JUNE 12, 1954



Eisenhower is far from committed to more military spending because of the Indo-China situation. All the facts that can be got from the Pentagon, the White House, and Capitol Hill fail to indicate any big new money requests for defense. The businessman trying to figure what to do in the next few months ought to wonder whether the headlines he's been reading really wash.

The Treasury, for instance, feels that a stepup in defense spending has been stressed too much. Secretary Humphrey went out of his way in his recent New York speech to try to knock down the idea that any \$10-billion or \$15-billion buildup is imminent. He's represented as fearing that businessmen may be counting on a defense spending spurt, and so are making their buying and inventory plans accordingly. Humphrey doesn't want a deflationary reaction setting in if military spending doesn't turn up.

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Indo-China intervention—short of ground troops and thus big war—can be financed within today's spending ceilings. Even the proposed sally of Adm. Radford is based on current budgets.

Here's the reasoning for firmness in the Pacific without mobilization:

The immediate crisis will have to be dealt with before an extra dime can be spent. So Eisenhower is deferring any request of Congress for intervention in this critical period.

A Southeast Asia dance can hardly be effective before early fall. If a new buildup were to be signaled, it wouldn't come before then.

Short of big war in Asia, the nearly \$1-billion now available for Indo-China would suffice for a military alliance in the Pacific. And though a lot of spending figures have been bandied about in Congress, no Pentagon nor Administration official has yet been nailed down as recommending a new defense figure. Indeed, Eisenhower and Secretary of State Dulles have underlined this position in the last few days.

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The proof of the pudding is in Congress. The Senate Appropriations Committee, handling the \$37.5-billion military budget, and the Armed Services Committee have heard all hands—from Radford on down. And no increases in money outlays have been voted. The figuring is that the \$800-million already earmarked for Southeast Asia, plus another \$160-million or so available, will finance a defense line against Red aggression in Vietnam, if it holds, or south of that if the French fold.

The significance bears repeating: Business plans, for the short haul, can be based on the feeling in the government that another mobilization of the Korea type is remote—as of now.

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One-year extension of reciprocal trade with no protectionist strings is pretty certain now. House leaders are behind Eisenhower's compromise position, and efforts to write in restrictions in the House Ways & Means Committee and on the House floor probably can be beaten.

The Democratic move this week supporting the entire three-year Randall Commission program—which Eisenhower has agreed to lay aside—is bringing even more strength behind continuation of the Hull program. They probably can't get the whole package through the Senate or House, but the organized show on the Senate floor will certainly discourage high-tariff forces.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
JUNE 12, 1954

The Administration and Congress are further apart than ever on farm price supports. Eisenhower made it clear in his press conference that he would most likely veto any bill that came to him continuing 90% of parity for another year. And Secretary Benson has been hammering away at the way surpluses are piling ever higher in the government stockpiles.

The farm bloc in Congress is holding solid for 90% supports for at least another year. The House Agriculture Committee voted 21-to-8 for this on Tuesday. The Senate isn't quite so solid, but chances are good for the farm bloc.

Eisenhower's veto would put into effect 75%-to-90% flexible supports called for by the not-yet-used farm law passed back in 1948. It's an even tougher version of sliding scale than what Benson and Eisenhower asked.

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A new appeal for increasing the Treasury debt ceiling will be made by the Administration just as soon as the tax revision bill is through the Senate (page 32). The debt now is barely \$2-billion under the \$275-billion ceiling. Democrats still will try to keep the increase well under the \$15-billion Treasury Secretary Humphrey wants.

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News censorship planning in case of war is well under way. The military has enlisted World War II Office of Censorship people to enact "war games." The most recent sessions were at Denver, and Byron Price, head of censorship in the war, was back as top civilian. The outfit figures it could set up publishing codes within an hour after the word was given.

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The scope of federal lobbying ground rules has been narrowed and defined by the Supreme Court. Filing of reports on contributions or expenses, registration as a paid lobbyist are required only if these tests are met: (1) The person or firm solicits, collects, or receives contributions; (2) main purpose of the person or contribution must be to influence passage or defeat of legislation; (3) the intended method of accomplishing this purpose must be by direct communication with members of Congress.

—•—

Factory employment is still the crucial area in the economic picture. This week's Labor-Commerce Dept. report shows unemployment among factory workers rose another 193,000 in April, countering seasonal patterns. This fact dampened an otherwise heartening report showing joblessness in April was 160,000 less than in March, totaling 3.3-million.

Administration experts are now guessing the worst will be slightly more than 4-million. Economic Council Chairman Arthur Burns went on the record for that figure in his first public news conference (page 33). The peak will come with high school and college students leaving classes this week and next. Burns sees signs that business will pick up from now on.

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Census of business, manufacturing, and mining can be taken next year covering 1954 business if Congress now votes the money for it. Congress has approved the enabling legislation—and the Administration has already gone to bat for the money needed. Marketing men and economists have all backed the census as an aid to sharper selling to keep business up.

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MANAGEMENT

Industry and Army Battle for Grads

● Well over half of this year's male college graduates are bound for the armed services.

● Management scouts, trying to stake a claim on likely prospects, are using big bait to lure them back to their companies after their tour of duty.

● But the Pentagon—which wants to keep college men—is trying to block overindulgent corporation recruiters.

This is commencement week on college campuses, and some 500,000 seniors will receive diplomas.

Not long ago, say in 1939 when this year's 15th reunion class graduated, commencement signaled an infusion of fresh manpower for business. There would be greenhorn engineers in the drafting room, new faces at the teller windows, and young blades sporting shiny briefcases and crisp straw hats on the 5:15 out of Grand Central or North Western station.

This year, however, perhaps to a greater extent than any year since World War II, there's an entirely different pattern. The bulk of the male graduates are not headed for business and industry but for the armed forces. Instead of Macy's getting a new floor-walker, Charley Company, 15th Infantry, will get a new mess officer.

● **Who Gets Grads?**—Industry's loss is a sizable one. The Northwestern National Life Insurance Co., of Minneapolis, recently surveyed 128 colleges to determine what percentage of the men in this year's class face early military call. The estimates sent back varied all over the lot.

At the University of Illinois, which has a broad reserve officer training program, 90% of the commerce college graduates are seen headed for uniform. California Institute of Technology also figures 90% of its seniors are eligible for service. At the other extreme, Georgetown University, which supplies many men for government service in mufti, figures only 25% of its class of 1954 are going into uniform; the engineering college at the University of New Mexico says only 20% will go in.

The percentages reported are so spread, in fact, that a single figure average doesn't give a fair picture, but it's safe to say that at most schools somewhere between 60% and 75% of the graduating class are service bound.

● **New Hiring Policy**—If you talk with

personnel men and with college placement people, you find that in the face of this a new hiring policy has been shaped up.

Recruiters are glad to get Korean veterans and other exempt men, but mostly they are thinking in terms of post-service employment. The top graduates, say the upper 25%, are sought on a come-to-work-now basis, regardless of whether they face almost immediate call. Some of these men work only a few days, then go on military leave, usually retaining most of their employee rights. Engineering and science majors, wanted badly by both the armed forces and by business, get many such come-to-work-now offers.

Top liberal arts graduates get similar offers if they are headed for uniform. Other arts students, not in reserve training—and with a small chance for draft deferment if they go into business—are flocking to graduate school, thus postponing—in most cases—draft call. Wesleyan University, Middletown (Conn.) science and liberal arts school, with no on-campus ROTC, reports nearly 50% of its class is going on to graduate school, particularly medicine, law, and science. Less than 10% of the class is going into business.

● **Two Schools**—There is some difference of opinion on the ethics of a come-to-work-now policy. Companies such as General Electric Co., Standard Oil Development Corp., E. I. du Pont de Nemours & Co., and Aluminum Co. of America are for it. They feel they will need good men two years from now, and they see nothing wrong with signing them up now. Others, such as International Business Machines, Inc., prefer to work from the non-military group and those coming out of the service.

A percentage of the graduates—one personnel man guesses one-third—don't like the idea of signing up with a company now. They feel they shouldn't

morally obligate themselves to a company when they may change their minds while in service. Many companies can't fathom this. An oil executive, who graduated in the Depression, says: "Imagine turning down the guarantee of a job two years hence; you can tell those boys have never lived in bad times."

● **Keeping Tabs**—When graduates feel this way, and if they are top-flight material, a company generally takes steps to keep in touch with them while they are in uniform. GE says that this isn't always easy to do; servicemen are always hard to keep track of. But if the company gets an address, it sends the man literature and letters to let him know it is still interested in him.

Some colleges help the companies in this. Cornell, for instance, sends (on the servicemen's request) a bulletin that lists the general job picture at several hundred companies.

If a man is hired before being called, he may have a longer wait than anticipated. If he's an engineer or a scientist with a reserve commission, he probably won't sit around long; but if he is, say an economics major from Princeton with a commission in the Artillery, he may wait for four or five months. Once he goes in, the company generally puts him on military leave and sends him company literature while he's away.

● **The Pinch**—Understandably, the armed forces are caught betwixt and between on all of this. They know they will lose most of their college men after the required tour, but they are intent on holding a percentage. As a result, Pentagon policy tries to block overindulgent corporation recruiters. They prohibit job ads in official service publications (which leads companies to use privately owned papers such as the Army-Navy-Air Force Journal).

Up until a year ago, industrial recruiting teams went to separation centers to get in their pitch after the reenlistment officer had his say. Also, several post commanders invited industrial representatives to talk with men nearing the end of their tours. But recently this has been curtailed.

● **Looking Ahead**—Occasionally, men in the armed forces take the initiative. A few months ago, a group of enlisted technicians at a Texas post mailed a combined resume to 90 corporations. A spokesman for the group says that the results so far have been very successful.

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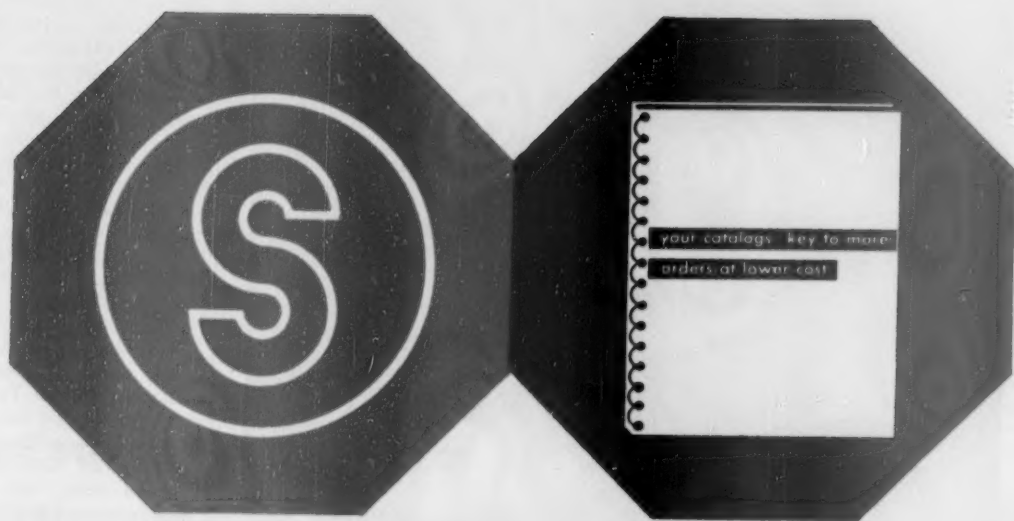
. . . a president if the line of succession is wide-open?
Auto-Lite Co. took the decision by the horns.

On May 1, minutes after his horse, Goyamo, finished fourth in the Kentucky Derby, Royce J. Martin, 69-year-old president of Electric Auto-Lite Co. of Toledo, died at Lexington, Ky. For 20 years Martin had been the company's president and board chairman. That left Auto-Lite without a top executive.

• Who Takes Over?—As far as Auto-Lite's employees and the public knew, there were three executives who could have taken over almost immediately. But what they didn't know was that by early April board members had already agreed to accept retirement options of all three executives, effective some time this spring. So, when Martin died, there was no obvious successor to the presidency—and for four days the company ran without a chief executive.

Then on May 5, the board met and elected James P. Falvey executive vice-president. But that was all. Still no top man. Toledo and Detroit began speculating. Roger M. Kyes, former General Motors Corp. vice-president and Deputy Defense Secretary, was mentioned for the job (as he has been mentioned for many others since his retirement from government; this week he returned to GM as a vice-president). Some said a Chrysler Corp. executive would be asked to take over, since Chrysler is Auto-Lite's chief auto parts customer.

• Decision—Then two weeks ago, Falvey got the job. He was elected president and chief executive officer. He'll



If you sell to industry this free booklet can help you to get more orders at lower unit cost. — It describes — ■ A dynamic concept of catalog design and distribution. — ■ A practical method of coordinating your advertising and catalogs to get more orders per hundred sales calls. — ■ A new technique for measuring the effectiveness of your entire catalog program. ▶

Sweet's Catalog Service—Dept. 400—119 West 40 St., New York 18, NY

Please send me [] free copies of the booklet

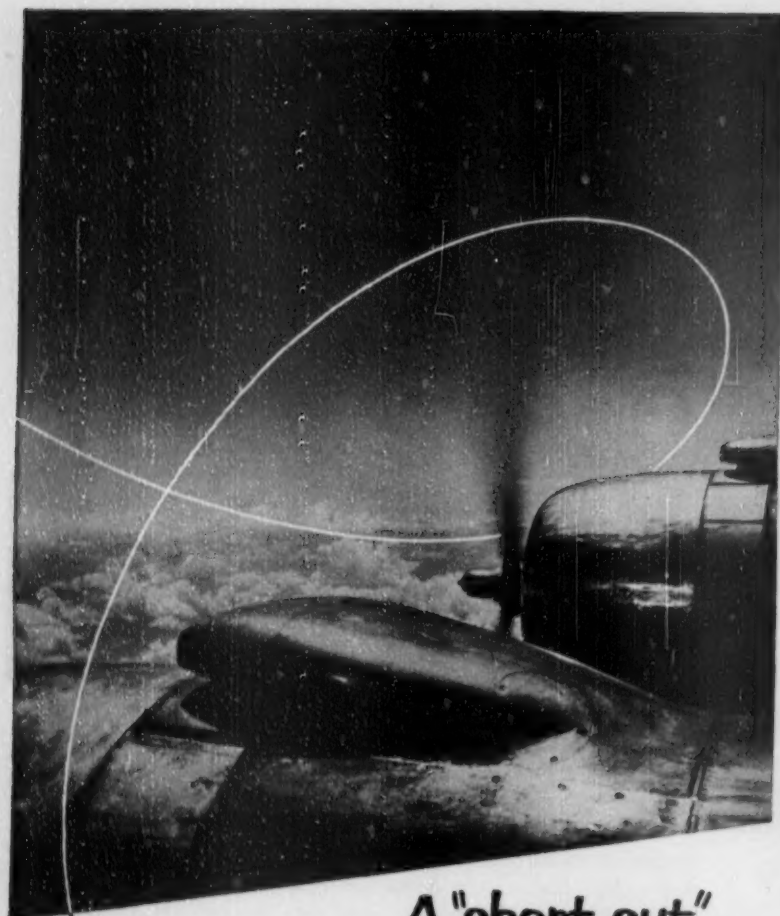
"Your catalogs: key to more orders at lower cost"

name

title

firm

address



A "short cut" to new business in distant markets...

How can a Chicago printer compete in New York for new business? Simple. We have such a customer. At the close of each day all his New York salesmen bulk their sketches, dummies, everything needed for preparing proofs. Emery picks them up and delivers them to the Chicago plant at 9:00 the following morning. That night completed proofs are returned by Emery to the New York salesmen before they are ready to take to the street the next morning. Because of this "short cut" shuttle service, our customer can compete with his New York competitors on an equal footing in providing proofs.

Maybe you're not a printer, but whatever business you're in you'll find Emery

able to "short cut" your shipping problems. That's why Emery is a big factor in the sales, production and service plans of America's leading corporations. Emery provides the Big-4 "musts" in moving goods—control, predictability, maximum speed, 24-hour service.

And you'll find these Emery features a big advantage too... pickup and delivery, day or night... "fire department" runs... individual shipment control for tracing reports... delivery forecasts... Air Procurement and Timed Delivery Services, special Assembly and Distribution privileges.

For this kind of service you would naturally expect to pay premium rates. But you may be paying more right now for ordinary service. Call us and get the facts.



"Air Freight For Better Business"
EMERY AIR FREIGHT CORPORATION

General Offices: 801 Second Avenue, New York 17.

Offices or agents in all major cities and towns in the United States, also serving Alaska and Canada.

preside at board meetings, since there's still no chairman for the job. With Falvey's election, the rumors were quashed, and talk of a merger of Chrysler and Auto-Lite was stalled. A merger with another top company would have been one way of getting strong management into Auto-Lite.

What happened at Auto-Lite is the type of situation any big company likes to avoid. When the top man dies without naming a successor, there's sure to be some sort of fuss. Fiction—for instance, Executive Suite—has it that this sort of situation may lead to wholesale knife-throwing by vice-presidents who consider themselves pretenders to the throne. In Executive Suite, the top job finally goes to a vice-president who leaves his knife at home and, instead, delivers a lofty speech to the directors.

• **Real Life**—In day-to-day business life, are there really such bloody fights? When all the conditions are right, there probably are. But there are other cases, like Auto-Lite's.

Auto-Lite had 20 vice-presidents when Martin died. A half dozen of them were listed as possible successors to Martin. But to Toledo observers Falvey got the job because:

• He is relatively young (49). He had headed Auto-Lite's labor relations for 11 years, had a good reputation both in and out of the company.

• He has a first-rate mind, strong organizational ability, and is popular around Toledo.

• He was known to be one of Martin's favorites. Martin personally brought him to Auto-Lite in 1934, later named him an executor of his will.

• **New Breed**—Like many other new young presidents (Crucible Steel Co. of America's Joel Hunter, Dun & Bradstreet Inc.'s Wilson Newman), Falvey is a lawyer. Where Martin was rugged, colorful, a wide traveler and race-horse owner, Falvey is quiet, scholarly, an inveterate reader.

But Falvey is very much a career businessman, and at the moment he has a desk-load of businessman's problems:

• He has to keep the confidence of Auto-Lite executives who might have succeeded Martin.

• He has to tackle Auto-Lite's sagging sales volume, which, in first-quarter 1954, dipped from last year's \$76.6-million to \$49.5-million.

• **Future**—Falvey says sales—particularly replacement sales—are beginning to look healthier, and may look even healthier if Auto-Lite moves into non-automotive fields, a possibility Falvey is seriously considering.

As far as an Auto-Lite merger is concerned, Falvey is turning a deaf ear. "There have been no negotiations," he said last week, "and none is pending, to merge Auto-Lite with any company."



FIRST BARGE LOAD of caustic soda moves into Chicago. Hooker caustic travels by barge through Great Lakes; down East and West Coasts; has even sailed from Tacoma through Panama Canal to New York.

Midwest saves thousands of dollars as chemicals move from new Hooker plant

Midwest industry is cutting thousands of dollars from the cost of buying certain heavy chemicals.

These savings are the direct result of a new Hooker plant at Montague, Mich.

Tremendous beds of pure Michigan salt—hundreds of millions of tons of it—lie 3,000 feet beneath the plant site.

Powerful pumps lift this salt to the surface as brine. Then high-amperage current changes the brine into chlorine, caustic soda, and hydrogen, all useful to industry.

Because it is closer to many users of these chemicals, the new plant is saving Midwest industry up to \$5.27 per ton on freight.

One customer, for example, will spend

about \$60,000 less this year on caustic soda freight charges.

Customers in the Chicago area can get caustic soda faster than ever before. Tank cars roll, on 24-hour notice, from Hooker bulk stocks right in Chicago. Barge shipments cross Lake Michigan from Montague, bringing caustic direct to dockside at large users' plants.

Midwest processors heartily endorse both these services—never available before in this area.

Everyone benefits when resources like salt are wisely developed. We've worked nearly 50 years at our favorite job—unlocking the tremendous usefulness in salt—making its derivative chemicals freely available to industry everywhere.



NEW PLANT makes chemicals from salt pumped out of vast underground deposits.



PLANT SITE is within 500 miles of 50% of U.S. industry, with ample facilities for shipping by rail and water.



How can your business profit from Hooker Chemicals? A free booklet "From the Salt of the Earth" tells how 30 industries use chemicals derived from salt. Also, Bulletin 100 describes Hooker products and how they may be useful to you. Send for both. Write to Hooker Electrochemical Company, 21 Forty-seventh St., Niagara Falls, N. Y.

From the Salt of the Earth

HOOKER ELECTROCHEMICAL COMPANY

NIAGARA FALLS • TACOMA • MONTAGUE, MICH. • NEW YORK • CHICAGO • LOS ANGELES

**HOOKER
CHEMICALS**

6-1047

rings...

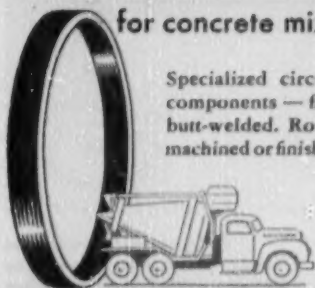
for a jet?



Titanium or alloy steel rings in any required diameters. Rough finished or machined to your exact specifications.

rotating rings...

for concrete mixers?



Specialized circular components — flash butt-welded. Rough machined or finished.

wheel assemblies..

for earth movers?



Weldments for heavy earth moving and road building equipment — tractors and agricultural implements.

Call AMERICAN WELDING

... if you use rings, bands, weldments, or other components that require fabrication by welding. Take advantage of our 35 years of welding know-how, of our complete designing, engineering and machining facilities. Send blueprints and let our Product Development Division study your problem.



Write TODAY for free Catalog of Amweld Facilities

THE AMERICAN WELDING & MANUFACTURING COMPANY
380 DIETZ ROAD • WARREN, OHIO



IT'S OWENS-ILLINOIS that sticks out in these ads—not the product brand names that often obscured the parent company before. The container maker now is . . .

Letting the Parent Get Word In, Too

O-I was losing its over-all identity as its divisions developed—and that hurt. Now it's pushing for greater unity.

Owens-Illinois Glass Co. has decided there is nothing like a name—but it's not worth much if you don't peddle it. In recent months O-I has had a disturbing feeling that it is losing its identity. While the company has been busy expanding and diversifying, brand names of its divisional offspring have increasingly overshadowed the parent.

As a result of the dimout, O-I customers, unaware of the scope of its product lines, have thrown some of their business to the company's competitors. It has lost out on the cumulative pull of a label that appears in advertising for a wide array of products. Moreover, many of its divisional employees have been oblivious to the fact that it's O-I they work for, uninformed on the company's stakes outside their sphere.

• **Making a Name**—For all these reasons the big Toledo firm (last year's sales: \$333-million) next month will launch a series of advertisements like those pictured above, in its first big national campaign to put across to its customers, the general public, and its own people the fact that it is a unified organization—not just a flock of brand-name divisions.

Moreover, it aims to make the public aware of its moves outside the glass business. Roughly 70% of its sales still stem from its glass container division, but in recent years diversification has made the word "glass" in the corporate name somewhat misleading.

So henceforth, as far as the public is concerned, the company will be Owens-Illinois—period. (Legally it retains its full name.) All products will be stamped with a new trademark—an "O" with an "I" in the center. Division ads will stress strongly the fact that while they may be talking about, say, Kimble scientific glassware, it's an O-I product.

• **Lost Identity**—What's going on reaches a lot deeper, though, than superficial changes in trademarks and promotional campaigns. In a sense, these are only symbols of a top management decision to start centralization in several areas of O-I's sprawling network of operating divisions.

Take marketing. Owens-Illinois has spread fast ever since it was born in 1929 out of a union of a bottle machine maker and a glass company. It has bolstered its market position in the container field, boosted volume despite the dent made by cans and other types of containers. In addition, it has taken flyers into new lines—from matched table glassware prepackaged as a hostess set to industrial products like high-temperature pipe covering, plastics, and plywood.

But company identification didn't keep pace with this growth. The parent was submerged in the splash of subsidiary and divisional brand names.

The upshot was that a customer would buy one product from an O-I division, but he'd buy another product—



As never before...

Today we are all aware of the disastrous and far-reaching effects of a major industrial fire. Owners . . . management . . . employees . . . customers . . . almost every one suffers, in one way or another, when a serious fire strikes.

Could it happen to your plant? Now is the time to take a long, close look at your plant's fire protection measures. Remember, the local fire protection ordinances normally only set minimum standards. Compliance with these ordinances is no guarantee of fully adequate firesafety.

One way to be absolutely sure of the efficiency of your plant's fire protection facilities is to call in an expert C-O-

TWO Fire Protection Engineer. He is ready and willing to help you with any or all industrial fire hazard problems.

There is a personal sense of responsibility inherent with C-O-TWO Fire Protection Engineers that assures you of fully adequate firesafety . . . a definite plus in your behalf. Whether it's fire detecting or fire extinguishing . . . portables or built-in systems . . . C-O-TWO means top quality backed by experienced engineering that results in operating superiority for you at all times.

WHEN BUSINESS STOPS . . . INCOME STOPS!

Don't take chances with your investment. Secure the benefits of highly efficient fire protection engineering today . . . our extensive experience over the years is at your disposal without obligation. Get the facts now!



MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeeze-Grip Carbon Dioxide Type Fire Extinguishers
Dry Chemical Type Fire Extinguishers
Built-in High Pressure and Low Pressure Carbon Dioxide
Type Fire Extinguishing Systems
Built-in Smoke and Heat Fire Detecting Systems

C-O-TWO FIRE EQUIPMENT COMPANY NEWARK 1 • NEW JERSEY

C-O-TWO FIRE EQUIPMENT OF CANADA, LTD. • TORONTO 8 • ONTARIO

Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Windshield-wiper motor of shows no wear after



ZYTEL nylon resin is a versatile engineering material for mechanical applications. Parts made of it are lightweight but unusually strong, resilient, with excellent bearing characteristics. Often they require no lubrication. Parts of "Zytel" can be economically mass-produced by injection molding. A typical example is this quill used on looms (cutaway view).



ALATHON polyethylene resin is readily processed by molders and extruders. It has good chemical resistance, low moisture absorption and excellent dielectric properties. It's tough and flexible over a wide range of temperatures. Freedom from odor, taste, and toxicity make it an ideal packaging material. A dent-proof flashlight case is shown.



TEFLON tetrafluoroethylene resin is specially suited for use under severe service conditions. It resists chemical attack. It has been used at temperatures of 500° F. Its outstanding dielectric properties are ideal for electronic applications. "Teflon" is formed by special molding processes or extrusion. Shown is an expansion joint of "Teflon."



LUCITE acrylic resin is used to make products that are both functional and decorative. The most beautiful of all engineering materials—it can be produced sparkling clear and in color. Products of "Lucite" are shatter-resistant, have good dimensional stability and possess excellent resistance to weathering. An automobile tail-light lens is shown.

Du Pont "ZYTEL" NYLON RESIN

9,500,000-cycle test

**This unique engineering material
has outstanding abrasion resistance ...
is lightweight and dimensionally stable**

Windshield-wiper failure on a truck can mean costly delay. Now an air-pressure wiper motor has been developed that's much less subject to failure than old-style motors. Its parts are molded of Du Pont "Zytel"† nylon.

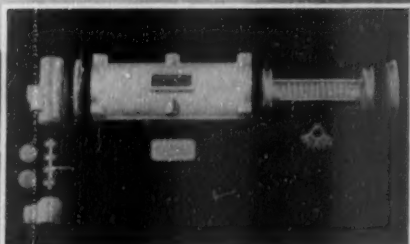
This motor weighs only 10 ounces—yet is so durable that the manufacturer claims it will outlive any truck. In a grueling test, the motor operated two wiper arms and blades for 9,500,000 cycles. Afterwards, the parts of abrasion-resistant "Zytel" showed no perceptible wear.

Corrosion, too, is no problem with "Zytel." And the motor parts won't leak air—keep dimensionally stable when exposed to temperature and humidity changes.

Parts for this motor are mass-produced by precision injection molding. Their smooth, resilient surfaces are ideal for handling moving seals. The manufacturer can keep down production costs because expensive surface-finishing operations are eliminated.

Have you and your company investigated the properties of Du Pont "Zytel" nylon resin and the other members of the Du Pont family of engineering materials—"Alathon" polyethylene resin, "Lucite" acrylic resin and "Teflon" tetrafluoroethylene resin? The applications shown here are typical product improvements—possible when design and service requirements are evaluated in terms of the properties of these unique engineering materials. For further information on the properties and uses of these materials, use the coupon below or write to E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Department, Room 336 Du Pont Bldg., Wilmington 98, Del.

†"Zytel" is the new trade-mark for Du Pont nylon resin.



Exploded view of 11 parts of Du Pont "Zytel" that comprise new air-pressure windshield-wiper motor. (Motor is manufactured by Sprague Devices, Inc., Michigan City, Indiana—molded by Danielson Company, Danielson, Conn.)



REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Registered trade-mark of E. I. du Pont de Nemours & Co. (Inc.)

E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Department
Room 336, Du Pont Bldg., Wilmington 98, Delaware.

Please send me more information on the Du Pont engineering materials checked:
☐ Du Pont "Zytel" nylon resin; ☐ "Alathon" polyethylene resin; ☐ "Teflon" tetrafluoroethylene resin; ☐ "Lucite" acrylic resin. I am interested in evaluating these materials for _____

Name _____
Title _____
Firm Name _____
Street Address _____
City _____
State _____
Type of Business _____

Write today for your **FREE** copy of the brochure . . .



"THE CENTRAL SOUTH,

where industry goes . . . to **WORK**"

The flourishing, progressive, industrial South provides all the elements your plant needs to thrive and grow. A rich supply of raw materials . . . excellent transportation . . . abundant, low-cost power and fuel . . . industrious, native-born workers . . . and close proximity to growing markets . . . all combine to make the Central South a productive land of opportunity, growth and prosperity.

Just address:

George Barbee,
General Industrial Agent
The Nashville, Chattanooga
& St. Louis Railway
203 A Union Station
Nashville, Tennessee



THE NASHVILLE, CHATTANOOGA & ST. LOUIS
RAILWAY



**" . . . the customer thought
he was dealing with three
different companies . . . "**

OWENS-ILLINOIS starts on p. 48

made by a different O-I unit—from a competitor, because he didn't know he could get it from O-I. In fact, customers, who might buy scientific glassware from the Kimble division one day, bottles from an O-I glass container man the next, and tumblers from a Libbey man the third, often thought they were dealing with three different companies. The O-I connection never occurred to them.

• **Need for Unity**—Smith L. Rairdon, vice-president and director of marketing who is heading up the centralization of O-I, puts the idea behind the new drive this way: "We believe proximity breeds sales."

The centralization move got rolling after O-I called in Stewart, Dougall & Associates, marketing consultants, to prove what seemed fairly obvious—the need for more coordination. The consultants discovered in a survey that even though O-I was quickly recognized by buyers, they didn't grasp its full scope as a company. Many saw Kimble and Libbey as separate leading suppliers.

One approach to solving the problem is advertising. Some of the company's most valuable trade names will still be promoted—Libbey and Kimble, for instance—but the number of trade and company names featured in the past will be reduced.

On a second front, teams of O-I men out of Toledo will spread the word among the divisional people in the field—top-level down through department meetings—that it is O-I they work for. Just educating each unit in what others make will take time. It's a big job to realign the thinking of people who have worked as autonomously as have the various O-I divisions. It will take about a year to complete this program.

• **Under One Roof**—In addition, advertising is going to be centralized in Toledo, along with merchandising and press relations. From here on, they will all be under one roof with Rairdon as boss. Operating decisions on sales and production will remain at division and subsidiary levels, though.

Carrying the physical centralization a step further, O-I is building a technical center in Toledo to house the company's research and engineering work, much of which has heretofore been scattered about the company's 30-odd plants. O-I is no slouch on research—it has spent \$44-million since 1946—but its management figures by

pooling its efforts results will be quicker and cheaper.

• **Market Fight**—All these moves are geared to put O-I in better shape for the competitive tussle it sees ahead, particularly with its traditional rival—the can.

So far, O-I has come out of every round on its feet. Neither the depression nor the early inroads of the can have held the glass container down.

In recent years, despite the entry of other container materials the glass industry—led by O-I—has pushed up its total output every year, to an 18-billion-unit peak in 1953. Glass men thank the growth of U.S. population and the spurt of glass-packaged baby foods.

• **New Aces**—But O-I isn't resting on its laurels, and it isn't counting entirely on glass to keep it on the crest in the future—although it has diversified its line into glass fibers (Owens-Corning Fiberglas Corp.) and a number of other products, such as scientific glassware.

Last summer, after government objections were beaten in court, it bought a 49% interest in Plax Corp., Hartford, Conn., biggest maker of squeeze-type plastic containers. In 1948 it bought into the plywood business, making hardwood veneer and plywood and lumber core panels for trailers, furniture, and television cabinets.

Its Kimble division makes television picture tubes and is ready to grab for a big share of the color TV bulb market when that business gets rolling.

But there is always the can. Once, O-I almost merged with Continental Can Co., Inc., but the stock market crash of 1929 killed that deal. Later it bought a can company but sold it to Continental after a few years so it could concentrate on new opportunities for glass expansion.

Today O-I is keeping a wary eye on the relentless push of the can and plastic people. In the past it watched beer bottlers switch to cans, but up to now O-I and the industry held a pretty tight grip on beer packaging in large sizes. Now, though, Jos. Schlitz Brewing Co. has started elbowing in to market 16-oz. cans of beer along with the standard 12-oz. cans (BW—Jun. 5 '54, p54).

Then, too, soft drinks have always come in glass bottles. But more and more companies are starting to can their soft drinks.

• **Pioneer Territory**—For O-I, this constant threat from other materials obviously makes it imperative to (1) have a marketing program with clear direction from home base, and (2) effectively publicize the scope of O-I's lines with its customers and the public.

And O-I isn't stopping with marketing and promotion in its efforts to hold its ground and reach for more. In recent weeks, it has:

Precaution for Safety



WHEN your cargoes are insured through the Marine Office of America, you have professional protection that is farseeing and dependable.

Then you have protection . . .

- that is written by marine specialists
- that shields you from financial loss in good times or bad
- that affords prompt claims settlement in practically any part of the world.

For all classes of marine insurance, you can do no better than specify—Marine Office of America!

See Your Local Agent or Broker

MARINE OFFICE OF AMERICA

116 JOHN STREET, NEW YORK 38, NEW YORK

Composed of the following Companies:

The American Insurance Company • American Eagle Fire Insurance Company • The Centennial Insurance Company
Fidelity-Phenix Fire Insurance Company • Fireman's Insurance Company • Glens Falls Insurance Company
The Hanover Fire Insurance Company



WESTERN DEPARTMENT
Insurance Exchange Building
Chicago 4, Illinois

SOUTHERN DEPARTMENT
Hart-Ross at Commerce Bldg.
New Orleans 12, Louisiana

PACIFIC DEPARTMENT
1400 Broadway Street
San Francisco 4, California

NORTHWESTERN DEPARTMENT
Calumet Building
Seattle 4, Washington

Offices in 22 Principal Cities

ALL CLASSES OF OCEAN AND INLAND MARINE INSURANCE



Woman with stapler beats woman twisting wire 3 to 1

...and cuts costs 60%! This is a bag-sealing race between two women who pack carrots in a produce plant.

The woman on the right is a whiz at twisting wire around the necks of bags. All by herself she can keep up with the output of 3 fillers and weighers. But twist as she will, she can seal only a third as fast as the woman with the Bostitch stapler.

The plant owner conservatively estimates that he has cut over-all fastening costs 60% by switching to Bostitch stapling. Then, too, it's less tiring, it's neater, and with highly perishable produce it shortens exposure time between field and refrigerator.

Bostitch stapling speeds fastening and

cuts costs in many fields. It can replace welding of sheet metal. It can upholster chairs, seal cartons, insulate walls, shingle roofs, fasten gadgets to display cards. Every day brings word of new uses from enterprising builders and business and production men.

Perhaps your fastening jobs could be done better and faster with one or more of 800 kinds of Bostitch staplers. Call one of our 325 Economy Men who work out of 123 U. S. and Canadian cities. As a member of the largest and most carefully trained group of its kind, he'll tell you *honestly* whether it will pay you to switch to stapling.

Look up "Bostitch" in your phone directory or write us.

Fasten it better and faster with

FREE time and money saving bulletins
tell how stapling can cut your costs.

BOSTITCH, 446 Mechanic St., Westerly, R. I.

I want to fasten:

☐ plastic bags ☐ wood ☐ light metals ☐ leather ☐ cartons ☐ rubber ☐ fabric ☐ roofing

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

BOSTITCH

STAPLERS AND STAPLES

• Set up a research grant for Massachusetts Institute of Technology to bombard glass with atoms, uncover information about glass structure not now available. Says Preston Levis, chairman of O-I: "We utilize only about 1% of the potential maximum strength of glass. If we could push that up 1%, it would open up big new areas for glass packaging."

• Established a subsidiary, Owens-Illinois Inter-America Corp. to go after a bigger share of Western Hemisphere business, and named a vice-president of foreign affairs for the first time.

These two developments plus the centralized promotion program open the way for a new phase of O-I growth regardless of competition.

MANAGEMENT BRIEFS

Republic Steel is adding another group of companies to its organization by buying the eight factories (located in eight states) of Cleveland Chain & Mfg. Co. The chain company's inventories, fixed assets, and business will be exchanged for an unstated amount of Republic common stock and cash. This is the latest of several acquisitions Republic has made since World War II.

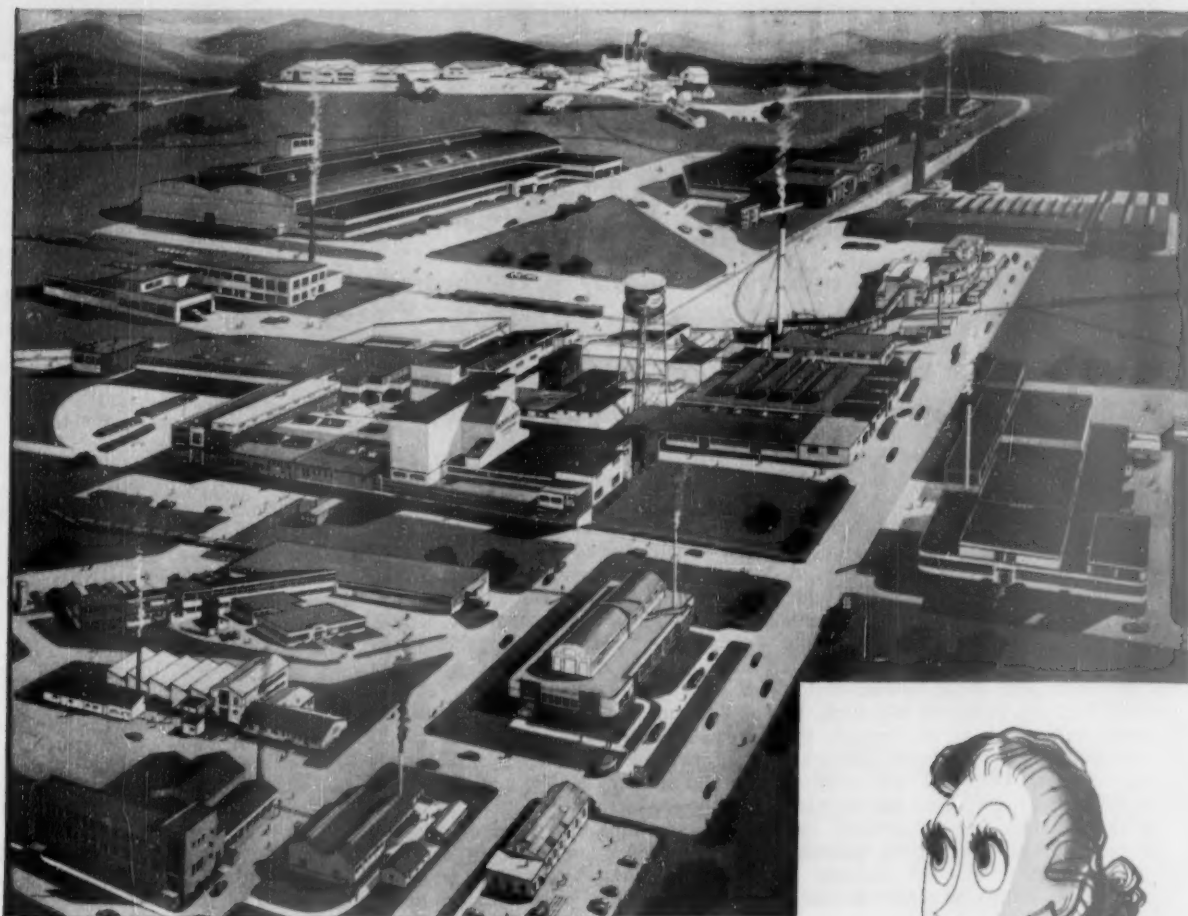
• Harvard Business School will hold its 24th National Business Conference at Cambridge, Mass., on June 12. Leading speakers will be Gen. Lucius Clay, chairman of Continental Can, Elmer Lindseth, president of Cleveland Electric Illuminating Co., Theodore Yntema, Ford's finance vice-president, and Nathan Pusey, Harvard's president.

• Summer jobs for college students are hard to find in Canada, according to the Toronto Star. At the same time, the market for graduates has never been better, in Canada or in the U. S. (page 43). Top engineering students are as sought after in Canada as in the U. S. Many are offered up to \$400 a month upon graduation. Accountants are just behind the engineers; arts majors bring up the rear with salaries of \$225 to \$250.

• Undependability is the employee characteristic that irks employers the most, says Sylvia A. Sorkin, St. Louis management consultant who recently made a survey of 1,000 executives.

• Anti-coffee breakers are not extinct among management men. Speaking at a St. Louis convention of the National Office Management Assn., a Prudential Insurance Co. executive declared that the Pru disallows leaving the building for refreshments and bars food being brought in.

DA products — keyed to basic human needs



Composite drawing of Dewey and Almy plants all over the world.

Mam'selle is astonished, no?

MADemoiselle LA SECRÉTAIRE never knew the world-ranging scope of Dewey and Almy's operations . . . until she joined our staff in Epernon, France. And *you* may be astonished, too!

For you may know Dewey and Almy only from the viewpoint of your own industry. If you're a meat packer, you may think of us only as the developers of the now-famous CRYOVAC vacuum-sealed packaging which has swept your industry. If you're a shoe manufacturer, you know our shoe products, but may *not* know that Dewey and Almy is also a top supplier of battery separators, chemical products for the construction industry, can sealing compounds . . . dozens of other products.

The fact is that Dewey and Almy is a growing company with plants all over the world . . . with a family of products and processes and new ideas that bring benefits to virtually *every* industry.



DA
DEWEY and ALMY
Chemical Company

Cambridge 40, Massachusetts

Offices or Subsidiaries in principal U. S. cities and in Buenos Aires, Copenhagen, London, Melbourne, Milan, Montevideo, Montreal, Naples, Paris, São Paulo, Tokyo.
Shoe Materials • Sealing Compounds for Food Cans • Adhesives • CRYOVAC bags for Food Packaging • Soda Lime • Flowed-in Gasket Compounds
Battery Separators • Chemical Products for the Construction Industry
Meteorological Balloons • Textile Printing Products • Organic Chemicals

MARKETING

1954's Salesman: Cocky and Sure

● He cheered when their president, Robert A. Whitney, told the National Sales Executives convention:

● "A new rush of orders is on the way." He cheered again when Whitney added:

● "And in the ears of America's salesmen may soon be ringing the demand, 'How soon can we get delivery?'"

There seemed to be only one man with a problem on his mind at the National Sales Executives conference in Chicago last week. He was a Midwesterner, and his wife had just won one of the big door prizes at the conference, an all-expense vacation for her and her husband in Bermuda. The thing he was worrying about was paying the income tax on the trip.

If anyone else at the Conrad Hilton Hotel had any problems last week, he wasn't talking about it. Indeed, the outstanding characteristic of NSE's annual meeting this year was what it revealed about the new state of mind of the salesman. It is probably safe to say that no meeting of salesmen since the late 1920s has occurred in such an atmosphere of confidence, well-being, and hope.

● **All Agreed**—The talk on the rostrum and in the corridors dovetailed perfectly. Speaking both in public and private, the men who attended the NSE sessions agreed on the state of the economy. The consensus: We're over the worst. From now on things are going to be better than ever before.

As the meeting progressed, it was fanned by a steady breeze of bullish talk:

● A paint manufacturer who sells protective coatings to the chemical industry, just back from a 3,000-mile sales trip—"In 35 years of selling, I've never seen things better."

● A building materials sales executive sees a million housing starts in the offing this year, looks for a sales level just slightly below last year.

● An executive of a major merchandising chain—"Fall this year will probably be better than last fall."

● The sales manager of a business machines concern says his sales are running ahead of last year at this point.

Meanwhile the speakers were stoking up the economic fires.

The NSE Board of Directors set the pattern with its official statement to the 1,400 sales executives present:

"We come to the conclusion that the American economy's state of health is excellent. We have just about passed the crisis state of the recession and are moving ahead to better and increased business activity."

● **A Word from Washington**—Walter Williams, Under Secretary of Commerce, expressed virtually the same sentiment on the closing day of the conference:

"No one can forecast events, but on balance there would seem to be strong reasons for feeling that a good, solid bottom is being laid for a renewed rise in business activity."

His reasoning was based on the industrial production index (it stopped sliding in March), prices (generally firm, with farm prices edging up a slight bit), personal income (only 2% off the 1953 peak), construction activity (4% up in May over the year before), new plant and equipment expenditures (down only 5% from last year), and personal savings (if anything running too high from the standpoint of merchants).

● **Mild Gloating**—What made the sales executives particularly pleased was the thought that they, in their native optimism, had been right all along about the course of the economy when pundits had been wrong. Their thought was translated into words by Robert A. Whitney, president of NSE:

"The most heralded recession in history, that of 1953, has turned out to be the biggest false alarm in history. The prophets of doom and disaster told us that we were heading for a depression. As usual, they were wrong. In fact, since 1947 we've checked these so-called experts and found they've been 82% wrong."

To Whitney and others, salesmen have listened once too often to "pessimistic economists." The salesman, who had felt in his bones that things were O.K., had been closer to the truth. This feeling gave the conference its special tone.

● **Whose Prediction?**—To some extent perhaps, the salesmen in the light on hindsight may have exaggerated the extent of their optimism a year ago. For, in the words of an economist who looked in on the session (incognito), "It wasn't the experts who turned blue when things started to slide; most of us called the shots just the way they turned out. It was the salesmen who panicked."

The fact remains that the typical salesman regarded the apparent upturn of business as a personal vindication. It led him to a self-confidence stronger than he had ever dared indulge.

● **Postwar**—It even led to some reappraisal of the salesman's postwar role. Looking back at all the criticism that has been heaped on the heads of salesmen because of their alleged failure to sell since the war, the outgoing chairman of the NSE board, J. C. (Larry) Doyle, sales and advertising manager of the Ford Motor Co., said:

"You know, salesmen haven't done so badly after all—or we couldn't have moved goods in such massive quantities."

As observed at Chicago, the salesman of today is more serene and confident than he was even a couple of years ago, when the economy was steaming along toward new highs. He admits that he has to sell harder but he is less grim about it. He is relaxed.

The sales executive is hacking away bit by bit at the problems that confront him, one of them being the job of growing up to the role that the economy has created for him. In other words, sales executives are hiring more salesmen. One of the top NSE officials notes, "Recruitment is going on all over the country right now." His own company has been shaking up the New York sales office recently. It fired or eased out some 30-odd men—both young and old—and added another 75, bringing the total sales staff of the office up to 240.

As he and other sales executives see their problem today, it is in part the result of having let the economy get away from them. Staffs are no longer capable of keeping up with the increased population and the spread of industry.

● **Building Him Up**—The salesman's confidence has been increased by his own growing sense of importance in the economy. He has heard often in recent months the kind of thing told him last week by Ben H. Wooten,

president of the First National Bank of Dallas, and one of the principal speakers at Chicago:

"The American salesman is the major architect of our American economy, and no business can succeed unless its executive leadership has the capacity to sell and to inspire others to sell its products and services."

The consensus was that the salesman has risen to the occasion. He has matured.

Sales executives have come a long way since their salad days of the 1920s, when the salesman first became a major figure on the American scene. Judging from what went on at Chicago, most of the tub-thumping, the hoopla, the back-slapping, and the trappings of the sawdust trail that once characterized the business are on their way out, or already have gone.

- **Grownup**—There was a feeling that the sales executive's range of interests has widened; he has become more sophisticated. He can take his economics today without a lacing of inspiration and faith. The NSE picked Wooten to assess the business outlook, and Wooten laid a few facts on the line that sales executives would have been unhappy to hear just a few years back. Wooten based his estimate of strength underlying the economy on these grounds.

- The defense program, which will remain at \$40-billion or \$50-billion for "a long time" and will keep a minimum of 9-million people engaged either directly or indirectly;

- A changed philosophy of government, which ensures that no administration, no matter what breed, can tolerate a depression;

- The size of the federal debt and the federal budget, which "make it imperative that the economy operate at a high level."

There is no doubt that salesmen are aware of these factors, particularly that of defense spending. Their spokesman, Whitney, noted at the opening of the conference that one of the things that is again boosting sales is "an increase in defense spending."

- **Upgrading**—NSE itself has played a major role in the process of helping the sales executive to mature and to broaden his horizons.

"The kind of session we're holding here," said Whitney last week, "couldn't have been held a few years ago."

The sales profession has been reacting favorably to NSE's brand of medicine. Just after the war it had less than 7,000 members. Today it has 23,000. Says Whitney:

"Give us three years and we'll be bigger than NAM."

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Trading Stamps in Trouble

Coupon premium system that's spreading fast is under fire in court on fair trade grounds. Meanwhile both stamp companies and retailers are finding flaws in the setup.

The booming business in trading stamps has run into a couple of snags.

Trading stamps are those colorful little coupons you can usually pick up with your purchases at the grocery store and the filling station, turn in for merchandise premiums or cash after you've saved up enough books of them.

The last few years the stamp business has spread fast all over the retailing map (BW-Oct. 17 '53, p. 54). But like other gimmicks of the hard sell they cause retailers some headaches. And the very fact that the stamp business has grown so fast has led to competitive pressures that now are checking it.

Trading stamps are running into trouble:

- **In the courts.** Stamps are essentially price discounts, so the proponents of fair trade—itsself facing key court tests—are out to try to get stamps declared illegal on the grounds that they violate state resale price maintenance laws.

- **In the market place.** Though stamps boost sales, some retailers regard them merely as booster shots, and drop them as soon as customers start coming in. Other retailers say they are finding that the stamps cost too much, or are too much bother.

- **Stamp System—Here's the way trading stamps work:**

The stamp companies sell pads of stamps to retailers at a rate of .0025¢ to .003¢ per stamp. The retailer then gives them out to his customers, usually one for each 10¢ worth of goods or services.

The customer pastes his stamps in a little booklet. When he has spent about \$120-\$150 in purchases, his book is worth anywhere from \$3 to \$5, depending on what merchandise he wants to redeem it for, or whose stamps he's collected.

If, for example, the customer wants a GE toaster that retails at \$16, it will cost him anywhere from four to eight books, depending on what value the particular stamp company places on its stamps. To fill that many books, he's bought about \$500-\$600 worth of goods or services.

A wide selection of household wares, clothing, jewelry, furniture, and even sporting goods is offered in catalogs put out by the stamp companies. Some stamps may also be redeemed for cash, but this practice hasn't caught on as well.

The customer gets his premium mer-

chandise from the stamp company "redemption center." This may be a separate store, or a booth that's located in a regular retail outlet such as a supermarket.

These two are called Class A and Class B centers. At least one company has a Class C center, where the merchandise is only displayed—you actually have to go to an A or B point to pick the merchandise up.

- **In the Act—Biggest national dispenser of trading stamps is the Sperry & Hutchinson Co. of New York City,** whose founder originated the whole idea back in 1896. The company has grown in spurts, especially over the past five years.

It now operates in 44 states, has 350 salesmen and eight warehouses for its premium merchandise.

Another big company is the Eagle Trading Stamp Co. of St. Louis, Miss., which was formed after the May Department Stores Co. experimented successfully with stamps.

S&H's success with its green stamps has apparently spurred dozens of other companies into being, but for the most part they operate on a local basis rather than nationally. Each brand uses a distinctive color—though S&H says some of its competitors have copied the green idea.

You can also get red, orange, or yellow stamps—one firm calls its stamps "Black Gold."

The stamps have been adopted by a wide variety of retail stores. A partial list includes groceries, drugstores, gasoline stations, clothiers, dry cleaners, jewelers, florists, beauty shops, appliance stores, and department stores. A coal company in Detroit uses them; in San Francisco a nursery and a Chinese newspaper give them out. But Houston's stamp rage tops them all—they are used there by a cotton gin, a rice mill, and even a mortuary.

- **With a Bang—There's no question that the stamps do attract customers.** A Hartford (Conn.) supermarket is reported to have boosted its sales a fantastic 100% in just one month after it started handing them out. A Pittsburgh food chain added \$7-million to its annual volume. Average boost is estimated at 20%-40%.

Stamps go over best in rural or suburban districts, especially in the Midwest and Southwest. Denver, Detroit, and Houston areas report that business in stamps is so hot that merchants are

Carpenter A. E. S.



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Another example of how Carpenter Application Engineering Service is helping industry cut costs, build sales.

Mention cowboys and Indians to kids from 3 to 13 and their eyes light up, cap pistols start barking, and the fun is on. The game hasn't changed much or lost its excitement since we were small fry... but today it spells big business.

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"... pressure from drug trade groups has caused some drugstores to drop trading stamps ..."

TRADING STAMPS starts on p. 58

engaged in stamp wars—they give out double, triple, and quadruple stamp dividends.

• **Legal Front**—It's in the South that trading stamps are facing their key court battles. Around the Roanoke (Va.) area, fair trading drug manufacturers and retailers discovered that green stamps had spread even into drugstores, traditional champions of fair trade. Pressure from drug trade groups (who have called stamp plans "a low-down, dirty racket") has resulted in some drugstores dropping their trading stamps.

One druggist is quoted as saying he didn't realize the stamps hurt fair trade "and I certainly want to be a fair trader." Others have stopped handing out stamps with purchases of fair-traded products.

But persuasion alone hasn't completely stopped the practice among drugstores, and fair traders are also worried by their old nemesis, the food stores, which are perhaps the largest users of trading stamps. Bristol-Myers Co. has a pending court action against Garland Drug Stores, a Roanoke chain; Mennen Co. has filed a suit against Mick-or-Mack, a local supermarket chain.

Last summer Sterling Drug, Inc., got a federal court consent injunction against Garland—but trading stamps weren't mentioned specifically by name.

These are the cases involving fair trade acts—the key legal issue that may help to decide the fate of both fair trade and trading stamps. The fair trade question also came up in Idaho, where the attorney general recently ruled informally that in his opinion the stamps were a violation of the fair trade act of that state.

A similar action in Iowa has been appealed, and is now before the state supreme court.

Cases involving different legal grounds have come up from time to time elsewhere. S&H claims it has won every price discounting case brought against it—and insists trading stamps are "a discount for cash, not a cash discount" and have nothing to do with fair trade.

• **Tax Angle**—Another move to discourage stamp trade has been through taxes. Many Southern states levy prohibitively high sales taxes on premium merchandise.

Kansas, Washington State, and Wisconsin also have placed severe taxes on



Clear-span Butler interior provides space for warehousing 35,000 sets of seat covers, plus material for additional 20,000 sets.



Lack of posts and obstructions gives ample room to arrange efficient work flow in sewing and cutting department at Star Seat Cover Co.

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says Mr. William H. Allen, President
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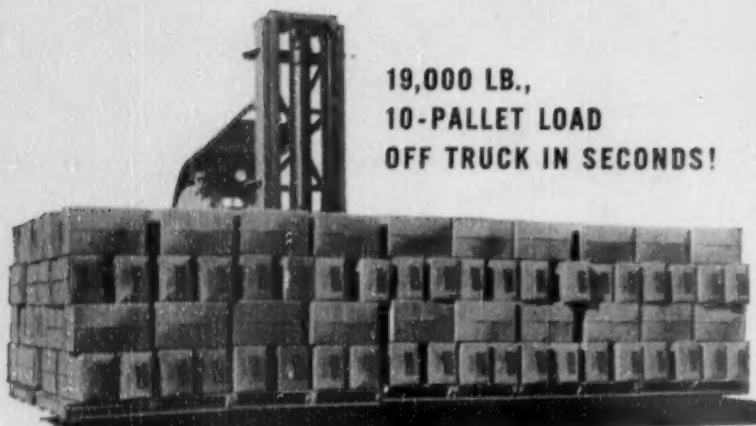
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A PERISHABLE COMMODITY like lettuce must be handled quickly, yet gently, to be profitable. H. (Hank) Bivins, El Centro plant superintendent, supplies startling figures to prove how Gerlinger Fork Lift Trucks put produce on the profit side for Vacuum Cooling Co. in six California and Arizona plants.

Formerly, four other pieces of motorized equipment... and four drivers... loaded one refrigerator car an hour per 8-hour shift. Today, Gerlingers and a modern pallet system make an 80-car day the average! Ten 4'x4' pallets easily manage up to 19,000 lbs. of lettuce. The fork lifts also unload 160 trucks of produce daily, as fast as loads can be unlash. Before Gerlingers took over, it was not unusual to have 40 trucks waiting to be unloaded.

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stamp merchandise. The District of Columbia goes further, prohibits the stamps entirely.

• **The Kinks**—Then, too, there are plain, practical business problems connected with the widespread use of stamps. S&H itself has blasted the tactics of some "fly-by-night" stamp companies that put their redemption centers in inaccessible places. Stamp companies have accused retailers of either handing out too many stamps (the stamp wars), or not giving out enough.

This hurts the business either way, say the stamp men.

On the other hand, many retailers say the stamps cost more than they're worth in terms of additional business—or that they take too much of the sales clerks' time and trouble. Retailers also gripe about advertising costs, and several stamp firms have responded by offering to handle their retail customers' advertising for them.

Sometimes retailers cover the cost of the stamps simply by jacking up their own prices—they say they can't make up the 2%-3% of dollar volume that the stamps cost through the added business alone.

Also, once a downtown shopping area gets saturated with stamps, the added business can last only so long. One Chicago merchant says: "Stamps are a problem to everyone but the retailer who gets them first—if he is any kind of promoter he reaps the benefits from the whole neighborhood."



His Honor Does It

Do-it-yourself goes civic-minded at Northfield, N. J. Mayor G. L. Infield (right) and the town fathers saved taxpayers \$1,500 by painting the city hall—with rollers and paint furnished free by American Products Co.

"How modern **coal** equipment saves us \$9,000 a year and solves our smoke problem!"



Says Albert E. Unruh,
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"Again and again over the last decade, coal burned with modern equipment has proved itself the most flexible, economical fuel for heating our school buildings. We made our first investment in modern coal equipment shortly after the last war. By 'restocking' two existing boilers, we saved \$9,000 the first year—actually \$2,500 more than we estimated. At the same time, we solved a disturbing smoke and flyash problem and provided enough steam capacity to heat additional new buildings.

"We're completely sold on coal. And when our building expansion program required us to further increase steam production, we again chose a modern coal-fired boiler. Coal has proved its ability to handle increased loads and save us dollars year after year. And modern equipment eliminates smoke nuisance."

Additional case histories, showing how other types of plants have saved money by burning coal with modern equipment, are available upon request.

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This is a smokestack. This beautiful War Memorial Tower actually conceals the smokestack for the U. of Detroit's steam plant. Though it's in the very center of the campus, there's never any smoke problem, thanks to a modern coal-fired power plant.

If you want to cut steam costs, it will pay you to investigate the advantages of modern coal equipment. For example, you may be able to save as much as 20% on fuel alone by replacing outdated equipment with modern stokers and boilers. Or, a small investment in modern controls and other up-to-date, fuel-conserving devices may boost efficiency of your present operation.

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FARMERS WATCH DEMONSTRATION AS

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SKEPTICAL farmers saw a baler pack hay so that it resists moisture, stands up under rough treatment, and reduces per bale costs from 7¢ to about 2½¢.



Wares to the Field

Last week, farmers in the rich central Illinois farm area were hustling through their chores and taking off on a busman's holiday. They were going to see—and try out for themselves—the latest offerings of the Allis-Chalmers Mfg. Co. (pictures).

Normally, late spring isn't the ideal time to try to sell farm equipment in the Middle West. Farmers are too busy to gallivant around to showrooms. On the other hand, if the manufacturer can catch the farmer at a time when the farmer is mad at his worn out or out-moded machinery, the chances of making a sale are good.

Farm implement manufacturers have long realized that they have to take their product to the fields. Farmers are a skeptical lot, who shy away from buying through a pretty catalog. They want to see how the machinery actually works. This year, A-C got around the industry's greatest obstacle: Instead of trying to lure the farmers away from their early plantings, the company decided to stage the demonstration in a flood-lit field in the evening, when the farmers had no excuse for not coming.

• **Hard Sell**—Generally speaking, farm equipment sales haven't been doing too well this year. Business is off from the giddy peaks of the early 1950s. Farmers are getting more choosy about what they buy, and when they buy. A few industry pessimists complain that the saturation point has been reached, that future sales will be confined largely to replacement of worn-out equipment. But others contend that today's farm tools are so much better than those turned out even three or four years ago that farmers can profit by buying the new stuff (BW—Oct. 3 '53, p94). But first of all, you have to show the farmer how this modern equipment

can cut operating costs and improve profit margins.

That's what Allis-Chalmers had in mind when it teamed up with five of its local farm equipment dealers to stage a series of demonstrations. Four of these "twi-night" shows were held in a little less than a week—at Onarga, Watseka, Hoopeson, and Paxton, Ill. In three of these, the local dealer was host; at the fourth, dealers at Hoopeson and nearby Milford teamed up. More than 500 farmers attended the four showings.

• **The Pitch**—R. N. Jorgensen, A-C "blockman" in charge of dealer contracts in the area, sparkplugged the whole program. He gave the sales pitch while associates put the implements through their paces. With a portable microphone strapped to his back, he kept up a constant patter, answered questions, induced farmers owning A-C implements to give impromptu testimonials.

• **The Proof**—As night settled, he moved the crowd to a spot under a 1,000-watt floodlight, where a plowing demonstration was held. Then he worked other good farming procedures into the show. At Hoopeson, he gave watchers a lesson in subsoil plowing—and incidentally displayed the tractive power of the A-C tractor. A subsoil plow was hitched up and run across a grassy section. The device bit down 18 in. into the earth, twice as far as the conventional plow. Then this section was plowed with a three-gang plow to a depth of about 8 in.

Two open-bottom boxes were buried in the plowed area, one of them carefully located atop the spot where the subsoil plow had worked. Water was poured in both boxes. In less than a minute, the water in the box over the subsoil furrow was gone; in the other

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Constantly doing things — better!

box, water still stood several inches deep.

"That's what subsoil plowing can do for you, men," Jorgensen said. "It breaks that hard shell which has formed just below the normal plow level; it lets the water and crop roots get down into the fertile subsoil; it helps prevent erosion."

One of the most spectacular demonstrations showed the workings of A-C's traction booster. This is a hydraulic control on the tractor that throws part of the weight from mounted implements onto the tractor itself when the going gets tough. By this device, the tractive effort of the wheel tractor is automatically increased, as required by operating conditions.

• **Payoff**—Just as this demonstration was finished, welcome rain began to fall and the Hoopeston crowd melted away. As the A-C men clambered into their car, Jorgensen remarked: "This rain will put farmers in a better mood to buy some of the stuff we showed them tonight."

Sales records of the participating dealers over the next few weeks will determine whether the "twi-night" demonstrations were worth the effort. If they are, it's certain that A-C will stage similar shows in other parts of the country.

New Finance Plan Eases Electricity Load

Portland General Electric Co. has, it hopes, an answer to one of the chief headaches in appliance selling: the inadequate wiring that so often stymies the householder when he sets out to install new appliances. The Oregon utility is offering customers a financing plan to ease them through the expense of getting their homes rigged up for the extra electricity load. PGE says it's the first to try the idea in its area, and one of the few in the country.

What PGE does is to allow residential customers to finance rewiring up to \$350. The customer calls in a qualified electrical contractor to get an estimate on what wiring is needed. Once they agree on a price, the customer figures how many months he wants to pay it in—12, 24, or 36.

The contractor sends the estimate and a promissory note to PGE for credit clearance. When he has finished the rewiring job, PGE pays him in full. Then it bills the user the monthly amount, which he pays along with his regular electricity bill. The customer can finance wiring for modernized kitchens and laundry equipment, or simply more floor plugs this way. The utility estimates that payments can run as low as \$3 a month.

A shot in the dark!

These girls at the Eastman Kodak plant in Rochester, N. Y., work in *almost total darkness*. They're spooling *unexposed* panchromatic film. Even this picture had to be shot in the dark—with *invisible* infrared light on infrared film. ■ Temperature and humidity, like light, must also be closely controlled at Kodak's 550-acre plant. One of the world's largest refrigeration installations does the job—a system including 21 Carrier Centrifugal Refrigerating Machines with a cooling capacity equal to melting 60,000,000 pounds of ice each day! ■ The gigantic Carrier units cool water or brine to five different temperature levels:



first name in air conditioning

40 degrees and 35 degrees, for air conditioning film processing and packaging rooms (as above); 9 degrees, to control solution temperatures in film and paper manufacturing; minus 30 degrees, and a cold, cold minus 85 degrees, to recover vaporized solvents. ■ Carrier control of temperature and humidity also helps produce better textiles and drugs, watches and optical goods, machine tools and automobiles. Why not let Carrier solve your air conditioning and refrigeration problems? Just pick up the telephone and call your nearest Carrier office. Or write directly to Carrier Corporation, Syracuse, New York.

The Suburbs Grow...

	County	Population Jan. 1, 1954	Gain 1950 to 1954	% Increase
Connecticut	Fairfield	369,400	65,058	12.9%
	Middlesex	330,100	65,228	24.6
New Jersey	Bergen	661,300	122,161	22.7
	Morris	199,000	34,629	21.1
	Other	2,830,800	217,804	8.3
New York State	Nassau	966,800	294,935	43.7
	Suffolk	379,500	103,371	37.4
	Putnam	23,500	3,193	15.7
	Other	1,133,500	129,372	12.9

Overall 17.1%

...While New York Rests

	County	Population Jan. 1, 1954	Gain 1950 to 1954	% Increase
New York City	Bronx	1,510,000	58,723	4.0%
	Kings	2,738,000	—	—
	Manhattan	1,961,000	899	—
	Queens	1,693,000	142,151	9.2
	Richmond	205,000	13,445	7.0

Overall 2.7%

It's Happening Everywhere

This table dispels any doubts about where people are going nowadays: They are kiting to the suburbs, and faster than ever.

The big city is still the magnet that pulls into its orbit people from the farmlands and the small towns. But this magnet's pull is stronger in the outlying areas than in the heart of the city. For some time, the suburban rush typically worked in two steps: first to the city proper, then out into the suburbs. Now apparently many people are bypassing the big city entirely. As the near suburbs fill up, they're piling into the remoter ones.

• **Stepped Up**—Figures released last week by Regional Plan Assn., Inc., of New York City, spell out this stepup in pace for the country's No. 1 metropolitan area. The whole area has had a 9% increase in population in the last four years. That's a bigger gain than the estimated 6% growth for the country as a whole. It's almost as big a gain as the area's 10.7% growth for the whole 10 years between 1940 and 1950.

Yet the big city itself made only the most modest progress. The five counties

that comprise the city proper grew only 2.7%. The two largest boroughs—Manhattan and Kings (Brooklyn)—registered no gains at all.

Against this, the metropolitan ring around the city swelled by 17.1%. Nassau County, just beyond the city's legal limits on Long Island, jumped 43.7%. Second biggest gainer was Suffolk—still farther from the city on Long Island—with a healthy 37.4% gain.

• **Survey**—What's happening in and around New York is no freak. A BUSINESS WEEK check of some cities across the country told the same story. While between-census figures are sometimes contradictory and often incomplete, the general trend comes through. For instance:

In Boston, the city proper gained less than 1% between 1950 and 1954. Its outlying area grew some 16%; during the whole decade of the 1940s, that same outlying area grew only 11.6%.

In Baltimore, the central city either gained only a trifle or actually lost ground—depending on the estimator. The outlying region grew some 30%.

In Los Angeles, the city showed a



THE BOSTON MAN IN 1954



IN DAYTON, OHIO...

Philip Sheridan, The Dayton Safety Supply Co.



IN SYRACUSE, NEW YORK...

D. H. Sanford, Sanford Fire Equipment Corp.



IN NEW ORLEANS, LOUISIANA...

C. H. Stem, New Orleans Equipment Company

* Philip Sheridan, The Dayton Safety Supply Co., 316 Longworth Street (Phone Hemlock 7454) keeps fire departments in the Dayton, Columbus, Lima and Cincinnati areas supplied with Boston products. An alert sales force assists at all times.

* D. H. Sanford, Sanford Fire Equipment Corp., 1620 Burnet Ave. (Phone 96451) specializes in custom-built fire trucks and other fire department equipment. Has serviced top New York State users for more than 30 years.

* C. H. Stem, New Orleans Equipment Co., 2633 Napoleon Ave. (Phone Jackson 8160) serves municipal fire departments in a wide area around New Orleans. Takes pride in 33-year record of "giving customers best equipment for their money."

SALES REPRESENTATIVES WANTED!

There are some key markets where franchises for the new fiber glass hose are available. The Boston Men above are typical of sales agents who are "first with the best" in the Fire Hose line. To enjoy this selling advantage, contact:

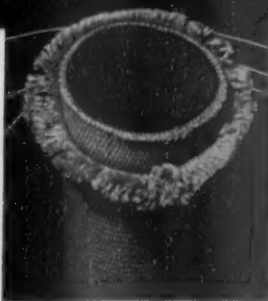
Boston Woven Hose & Rubber Co.,
Box 1071, Boston 3, Mass.



THE BOSTON MAN IN 1880

The
Boston Man
introduces revolutionary
fiber glass
hose

**You get more protection
from this basic change
in fire equipment**



Boston Woven Hose & Rubber Company's new fiber glass fire hose is 20% lighter than conventional fire hose, considerably stronger. It remains light even when wet, as glass fiber yarn doesn't absorb water. The hose remains flexible in freezing weather, is much more compact, coils easier and dries quicker. Seven fire-fighting problems solved in one stroke!

It's appropriate that Boston should develop this important improvement—because the company first brought out the present-day fire hose. Since then, technical achievements continued. Boston solved the problems of continuous rotary vulcanization, pioneered improvements in industrial rubber production, became the trusted "New England Craftsman" of the rubber industry, and now world's largest manufacturer devoted exclusively to mechanical rubber goods.

If you have an industrial rubber problem, Boston can help. Call our distributor in your area. He is your Boston Man.

BOSTON

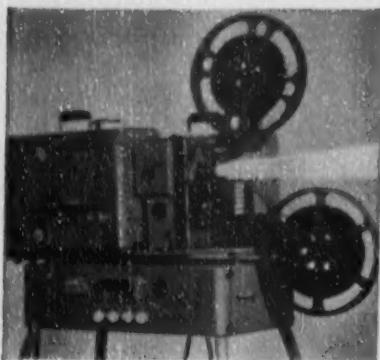
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bigger audiences

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Please send me information on the new RCA Porto-Arc 16mm projector and the name of my local RCA Audio-Visual Distributor.

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Company _____

Address _____

City _____ Zone _____ State _____

6.8% increase—and its central segment declined some 14%—while the San Fernando Valley, the Beach cities, and other outlanders jumped anywhere from 45% to 70%. In San Francisco, Chicago, and Philadelphia, the story was the same. Houston, Tex., reported a not inconsiderable gain of 16%, but even here the central part of the city shrank.

• **Babies**—New babies did their bit to push the total vital statistics up. Henry Fagin, director of Regional Plan Assn., estimates that natural increase—the excess of births over deaths—accounted for 45% of the 14-million people added to the whole New York metropolitan area since 1950.

But the everlasting shifting and movement of people was even more of a factor. Fagin estimates that at least 681,500 of that new population came from outside the area. For the fastest-growing counties, migration worked even more potently. Fagin figures it accounted for 85% of Suffolk's growth and 81% of Nassau's.

Just where they all came from and just where they went no one knows. The city itself appears to have contributed some 66,600 to its own suburban counties. If it had hung on to all its gains from natural increase, Fagin reports, the city would have added 281,600 people. Instead, it increased by only 215,000.

Migration added to the other cities, too. While Baltimore has been adding new babies to the tune of about 11,000 a year between 1950 and 1953, it has lost a good sum each year by migration. Los Angeles figures that newcomers arrive in its territory at the ratio of three to every new baby born.

• **The Auto**—This is an old story, of course. Most people credit the long move away from the downtown city—first noted in the '20s—to the automobile, and the auto is surely still in there pitching. To the extent that cities are unable to cope with all the cars, it encourages further decentralization.

In recent years, the gigantic baby boom played a part (BW-Dec.22'51, p73). That boom shows no signs of declining. Last year's births set an all-time high of 3.9-million, the third year running in which a new record was set. Babies, as everyone knows, are wonderful decentralizers. Parents want outdoor play space, good schools, and pleasant surroundings for their families.

• **Industry**—A different kind of population movement is also helping to build up the suburbs. That's the growth of industry in outlying areas. This is a big factor on Long Island, where World War II brought in a huge aircraft industry. One single group of statistics from New York State's Div. of Em-

ployment gives a clue on what's happening here. Between April 1950 and April 1954, employment within the city increased slightly—from 3,482,600 to 3,523,700. Meanwhile, in Long Island's Nassau and Suffolk, manufacturing employment zoomed from 46,800 to 103,100. Westchester County figures that in 1952 and the first half of 1953, some 125 sizable concerns moved in or announced plans to move there.

Once you get a movement of this sort started, Dr. Vergil Reed of J. Walter Thompson advertising agency points out, it becomes hard to sort out cause and effect. As people move, stores move with them, and the stores help attract more people. More homes open up, and more families come to fill them. Shopping centers follow the population—and the population follows the shopping centers.

• **It Hurts**—Which is chicken and which is egg may be a poser. But the outrush to the suburbs has made an unmistakable dent in the city's economy.

City after city, for example, reports a decline in its transit system as more suburbanites move around by car. Baltimore Transit Co. says its traffic is declining about 10% a year. In Boston, the Boston & Maine RR carried 11.6-million commuters in 1950; in 1953, it carried 9-million.

Utilities notice the difference. The number of kilowatt hours used within the city of Los Angeles increased by 621,111 between 1950 and 1952; outside they increased by 1.6-million.

Newspapers have felt the movement. In 1950, some 47.9% of the distribution of the Los Angeles Times was in the outlying areas; today it's up to 54.4%.

Boston newspapers note that they have to make home deliveries now to keep their circulation up.

• **Stores**—Figures to indicate what the suburban stores are doing to the downtown stores are skimpy. Federal Reserve Bank of New York, though, offers one small clue: In New York City, department store sales from January through April of this year held just even with last year's for the same period; in Westchester County, department store sales were up 6%. And while the downtown department stores showed a 3% loss in 1953 over the preceding year, the Westchester stores had a 4% gain.

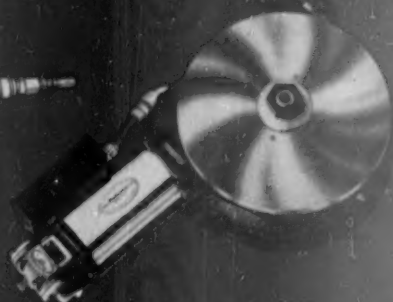
Whether all this spells the slow demise of the big city is a hotly debated question. The special census for Dallas, Tex., recently taken by the Bureau of Census (BW-Jan.23'54,p46) should throw some light on this when the results are in. Cities from New York to Ames, Iowa, are clearly concerned. The young married couples with children

EVERY ONE OF THESE "PACKAGED" CONTROLLED-AIR-POWER DEVICES HAS ONLY ONE REASON FOR EXISTING—

To Help You Get More Production at Less Cost



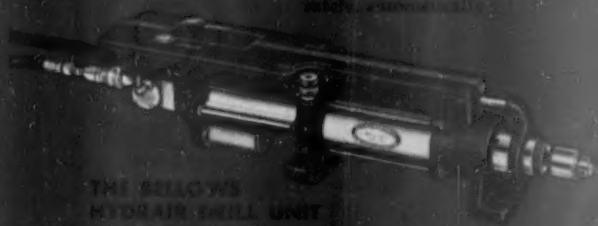
THE BELLOWS DRILL PRESS FEED
To convert manually fed drill presses to automatic machines.



THE BELLOWS ROTARY FEED TABLE
To feed parts to tools, quickly, safely, automatically.



THE BELLOWS LOCKS DRILL UNIT
Invertible, driven spindle, air-powered reverse, hydraulic feed.



THE BELLOWS HYDRAM DRILL UNIT
Air-driven spindle, air-powered traverse, hydraulic feed.



THE BELLOWS TRANSFER
To move parts from feeder to machine tools and guide work as going on.



THE BELLOWS CYL-AIR VISE
A ready machine for holding small parts.



THE BELLOWS ARROW PRESS
For fast, accurate pressing of sheet metal.



THE BELLOWS INFED ATTACHMENT
To speed production of large open end flanges, reduce errors in grinding.



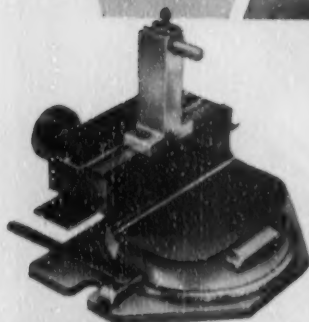
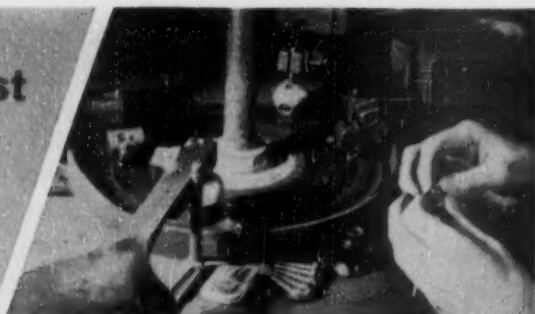
THE BELLOWS DVM-100 VISE
Air-Hydraulic Vise for milling machine attachment.

The Bellows Co.
AKRON 9, OHIO

B14A

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The specialists who produce Vinco B-1 angle tangent to radius Dressers have skill and experience equal to that of industrial diamond cutters. The B-1 Dresser will dress contours on grinding wheels to an accuracy within .0001". This accuracy is assured for the life of the dresser by its good design, sturdy construction and anti-dust features. The B-1 Dresser can be used on surface grinders as well as internal, external, "multi-purpose" and tool and cutter grinders. Its accuracy and simplicity of operation take all of the "guess work" out of wheel dressing.

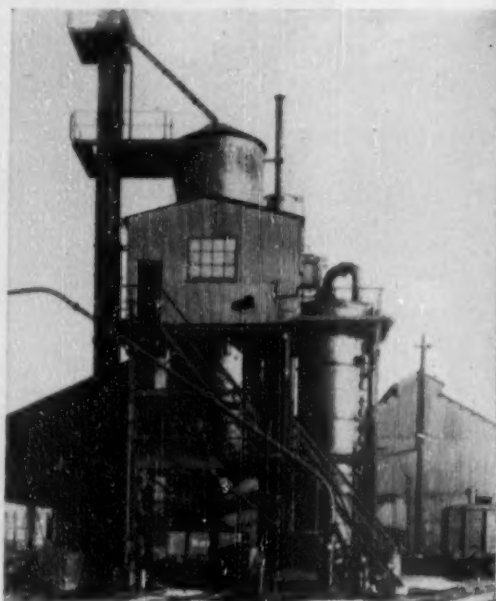
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COAL BILL CUTTER...

• A user of Wellman-Galusha Gas Producers reports a saving of 74% in coal consumption over another conversion method... plus big maintenance economies. You can't beat these plants for clean gas to fire kilns and furnaces. Find out how Wellman's experience in this field and in others can help you cut costs. Write for copy of "Wellman Will Build It". The Wellman Engineering Company, 7018 Central Avenue, Cleveland 4, Ohio.



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HEAVY MATERIALS HANDLING EQUIPMENT
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"WILLIAMS" CLAMSHELL BUCKETS
MECHANICAL GAS PRODUCERS
"ANKER-HOLTH" AIR AND HYDRAULIC CYLINDERS

who are moving away are good spenders; often the young people who come into the city to make their fortunes are not. Chicago, in particular, notes a stepped-up increase in its Negro population.

New York City itself, for all its poky progress, is growing at a slightly faster annual rate—0.7%—in this decade than its 0.6% rate during the 1940s. Houston reports both downtown and suburban areas are flourishing.

• **Busting Out**—What's more, not everything is roses in the suburbs. Chicago is a case in point. Illinois law puts a limit on school district bonding power, and fast-growing areas find they can't get the money for their schools. Water supply, police protection are also under a strain.

Yet there's no sign that the rush to the suburbs is subsiding. Family formation has slowed down in the past year, it's true, but more people are having second, third, fourth, and even fifth babies. The U.S. family apparently has settled for a suburban way of life, within reach—by car—of the big city.

MARKETING BRIEFS

Appliances down: A "glutted" market will pare some \$42 off Whirlpool's lowest-priced automatic washer as of July 1, bringing the price to \$188. Whirlpool makes Sears, Roebuck washers, and Sears cut washer prices this summer. Meanwhile, Easy Washer temporarily has quit making automatics, which it started last summer, is bearing down on low-priced models. And General Electric is readying an "economy" TV set.

• **A&P missed by inches** the \$4-billion sales figure anticipated (BW—May 22 '54, p. 58). Actual sales for the fiscal year came to well over \$3.9-billion—an increase of 6.2% over last year's sales.

• **Used car dealers in Kentucky** are responsible to the public for the condition of the cars they sell, the state's high court has ruled. The case involved Albert Brannon, who sued Gaidry Motor Co. when he lost a leg in a crackup in a car bought from Gaidry. The company argued the court was applying to "a single class of vendors" obligations "not even applied in this state to manufacturers."

• **Philip Morris' snap pack** (BW—Apr. 3 '54, p. 162) has the blessing of the Internal Revenue Bureau. There's no law that says the revenue stamp must be broken before contents are removed—only before the pack is thrown away.

Store Building Spree

Two department stores push big new buildings in Knoxville . . . "Convenience" items boost General Foods sales . . . Ad Council builds franchise business . . . Fair trade war gets hotter . . . Safeway blasts coupons.

Two Southern department store giants are squaring off for an expansion fight in Knoxville, Tenn.

The defending champ is Miller's department store, Knoxville's oldest and largest, which does an estimated annual volume of \$15-million and has 40,000 active charge accounts in 46 states and a number of foreign countries.

Challenger for the fast-growing Knoxville market is Rich's of Atlanta, whose \$56-million volume last year makes it the biggest department store business in the South.

The expansion fight started early this year, when Rich's took over S. H. George & Sons department store in Knoxville. It was Rich's first move outside of Atlanta.

Retaining the George name, Rich's promptly laid plans for a new \$5-million store, and bought an entire city block. Today, bulldozers are leveling the site, including an old mansion, a gas station, and a laundry.

• **Miller, Too**—Last week, Miller's announced it has bought a whole city block, too, and will put up "the largest store center under one roof in Tennessee," costing an estimated \$6-million. This will mean tearing down such landmarks as an old opera house and a hotel. Miller's said it had planned its new store early last year, before Rich's bought George's.

Miller's new site, like its old, is on Knoxville's main business drag, where most of the city's stores are located.

Rich's on the other hand is aiming to create "a suburban atmosphere" in its new store, which is actually only four blocks away from the main business section. Modern architecture and landscaping are planned, to "give the customer a feeling of space" instead of typical downtown commercial congestion.

• **Why**—Rich's said it picked Knoxville for its first expansion move because of the city's "unique" growth as compared to other Southern cities. As Rich's planning and plant management superintendent Alvin Ferst says, "I think this [move] is indicative of how Southern cities can grow.

importance in marketing. General Foods' annual report, out last week, underscores this point.

The big food company gained \$82-million in sales during the last fiscal year, bringing the total to \$783-million. That was a new record for General Foods, and its 21st annual gain in a row.

The significant thing about the gain last year is that so-called convenience items—instant coffee, puddings, cake mixes, frozen foods, pre-cooked meats, and the like—were responsible for \$69-million or nearly 85% of the increase. These items now account for \$186-million of total volume.

More convenience items are on the way. Example: General Foods is experimenting with canned soda pop, the appeal of which is largely in its convenience for the customer.

Smokey and Sparky

The Advertising Council may have found a new way to make money for good causes. The council, which has been behind a variety of causes from war bonds to freedom of speech, first stumbled on its idea with Smokey the Bear, the cartoon character it has used in ads for several years.

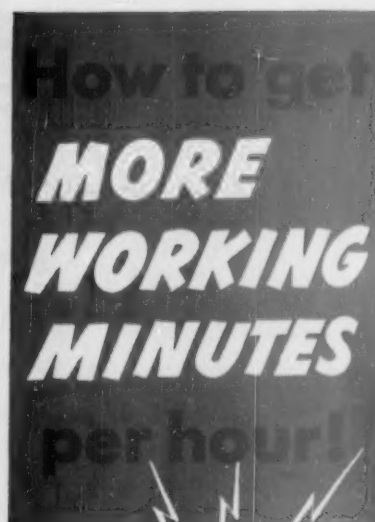
"Smokey" is doing almost as well in the merchandising world as in his original role of forest fire prevention bear. He is just starting his second year of "sponsoring" a fast-growing list of consumer products adorned with his name or likeness; and he has already earned an estimated \$50,000 in fire prevention funds for his owner, the U.S. Forestry Service of the Dept. of Agriculture.

Smokey Bear has become a familiar sight on car cards and posters. But his appearance on commercial products—such as children's toys and clothes—involves a unique licensing deal with the government.

• **Contract Terms**—Last summer Congress passed a special law to protect Smokey Bear's name and reputation, and outlined how he can be used to market manufactured goods.

All royalties from these special licenses go directly to the Forestry Service itself for use in fire fighting and prevention.

The council feels the plan has worked



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415 Lexington Ave., New York 17, N.Y.

Without obligation, send booklet describing how Executone helps cut costs. I am particularly interested in:

- ☐ Inter-office communication
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In Canada—331 Bartlett Ave., Toronto

Selling Convenience

The American consumer's love of convenience is assuming a growing im-

MEMO

To Engineering Executives

If you have a product development problem, an "outside" organization specializing in Creative Product Development can be most helpful, particularly on:

- Technical Survey to investigate objectively user and functional requirements and competition.

- Research and Development to establish fundamental functional layout.

- Design Engineering to meet performance, size, weight, appearance and cost requirements.

- Production Engineering to define the overall production method.

SEND FOR THIS

New 24-pg. Book shows scope and completeness of DFI facilities for Creative Product Development. A copy will be sent to interested business executives, without obligation.



DESIGNERS FOR INDUSTRY, Inc.

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so well that it's now working out a similar arrangement for another "safety animal"—Sparky, a dog in a fireman's helmet that warns you what not to do to prevent a fire in your home. Sparky is owned by a private organization, the National Fire Protection Assn.

Irked by Coupon Cost

Safeway Stores, Inc., the country's second biggest food retailer, has declared war on some of the practices involved in handling coupons. Time studies convinced store officials that, in the course of handling some 91,000 coupons at 225 stores, the food retailer took a considerable out-of-pocket loss.

Safeway figures that all the handling—sorting, tabulating, invoicing, plus interest on coupon money advanced—costs the store about 2¢ per coupon handled. Manufacturers usually repay Safeway 1¢ or 2¢ per coupon—not enough to compensate in full.

The food store argues that brand promoters have no more right to ask food retailers to underwrite a part of their couponing costs than the manufacturers' costs for magazine, newspaper, or radio advertising. So the store has written some big coupon users, asking them to ante up the whole cost of handling, plus a charge of 1¢ per coupon.

Update: Fair Trade

The fair trade war is getting hotter. Here are the latest developments:

- The Arkansas Supreme Court ruled the nonsigner clause of that state's fair trade act is in violation of the Arkansas constitution. The case involved price-cutting of Prestone antifreeze by White River Distributors, Inc., which was sued under the clause designed to force retailers who have not signed fair trade contracts to maintain manufacturer's minimum prices.

- A New York court upheld the constitutionality of its nonsigner clause in a case against three discount houses that had won lower court cases filed against them by fair trading manufacturers.

- Another case against Masters, Washington discount house shipping goods from non-fair trade area into fair trade states, was filed and answered in Baltimore court. The plaintiff is Bissell Carpet Sweeper Co. of Grand Rapids.

- A New York court jumped the gun on the Federal Trade Commission in ruling that simply because Eastman Kodak Co. has retail outlets this does not mean that Eastman fair trade contracts are horizontal price-fixing agreements with "other retailers." A similar FTC case is pending, but may be dropped.



These hands can borrow from any bank in town

**A frank statement about loans
... how they're made ... why
they're sometimes turned down.**

...

The hands above belong to a skilled craftsman. He's a solid citizen and a hard worker. He's also proud of his work, independent about money as a hog on ice, and downright strait-laced about meeting his obligations.

That makes him a good risk for any banker. Here's why.

Your Money at Stake

Most of the money in banks is money that belongs to the public ... money that you deposit in your bank. Bankers therefore must see to it that this money of *yours* is lent out only when there's an excellent prospect of its being paid back. That's why occa-

sionally some loan applications are turned down.

Willing to Take a Risk?

Bankers naturally like to lend money. That's their principal source of income. They'll take a considered risk but they can't afford to take long chances with other people's money. All in all, it speaks well for American business and the individual American that the great majority of loan applications are granted. When you hear someone growl about being turned down, ask yourself this question:

"Would I be willing to risk my own money on this promise to pay?"

You might or you might not. Bankers make mistakes, too. But the difference between a bank and an individual is that a bank has to have

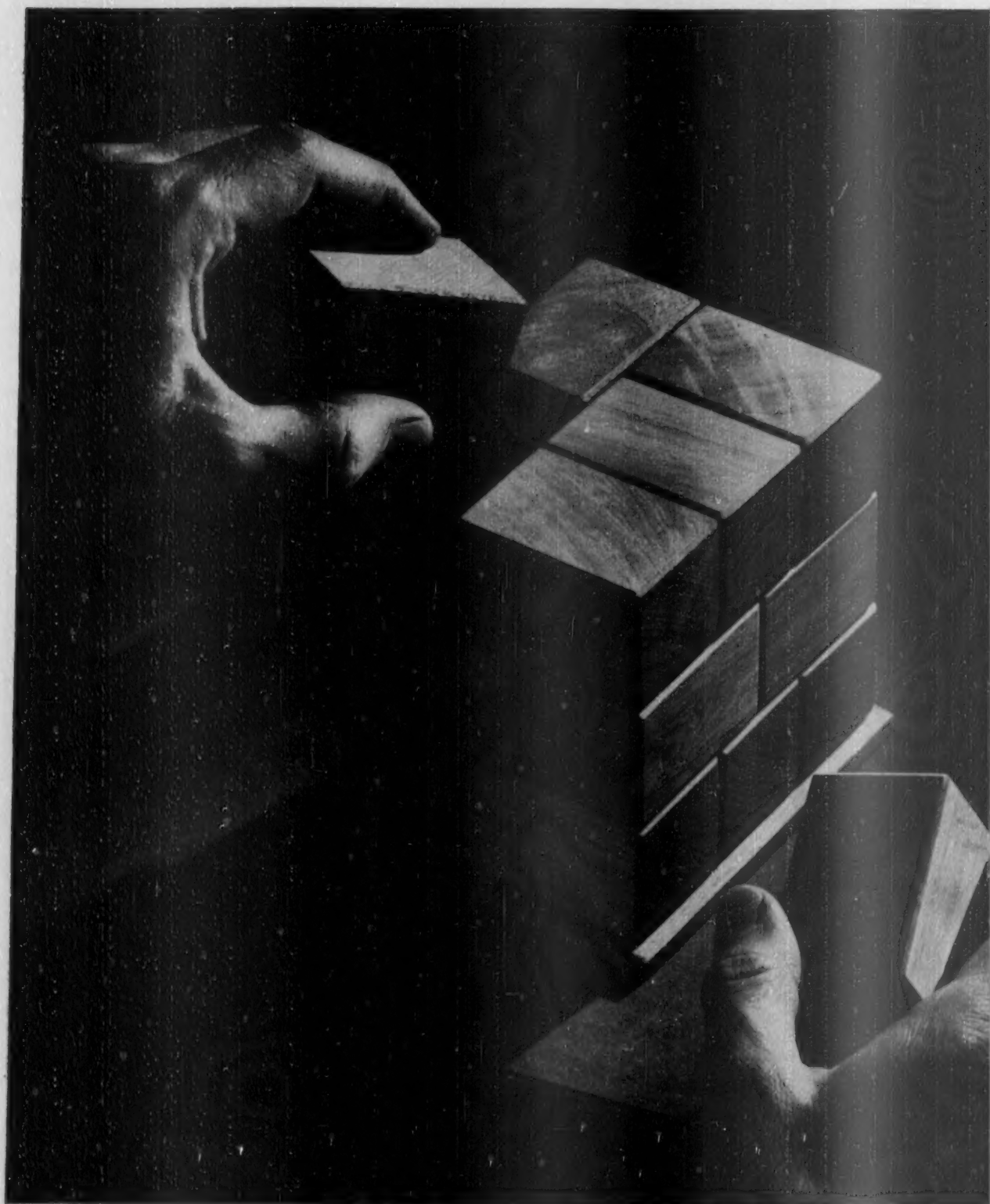
a high batting average in order to stay in business.

Banker's Judgment


There you have it. The banker has to be somewhat of a financial perfectionist. You may not always agree with his judgment but of this you can be constantly certain: his decisions are based on experience and old-fashioned horse sense. He makes them competitively, knowing that you can always go to another bank. As long as this remains banking's way of doing business, your money will be in good hands.

The Chase National Bank is proud of banking's contribution to the progress of our country.

The CHASE National Bank
OF THE CITY OF NEW YORK
(Member Federal Deposit Insurance Corporation)



As one of the great carriers of merchandise freight, the C&O sponsors this campaign in the belief that a better understanding of the Traffic Manager's job will contribute to the better and more economical movement of material.



The director of traffic is playing with blocks again

With the blocks he is demonstrating to Sales and Production that a change in the shape of the packing case will let the cases stack in an interlocking pile.

Because the interlocking piles are far stronger they can be stacked three pallets high instead of two. This means half again as much goods can be stored in the same warehouse space. It also means less breakage and damage to containers so the packages reach the dealers' shelves in a more attractive condition.

Will Sales and Production buy this idea?

Yes! Because Traffic has backed it up with figures showing an annual saving several times the cost of the proposed changes.

At the same time, the incident of the blocks demonstrates another valuable lesson: A business organization is strongest when Traffic interlocks with Sales, Purchasing, Production and Advertising, so that each contributes of its special skills and knowledge to the better functioning of the other.

This result can be best achieved when the Traffic Executive operates at the same management level as the heads of these other departments.

Chesapeake and Ohio Railway

TERMINAL TOWER, CLEVELAND 1, OHIO

PRODUCTION

Cleaning Up the Water Supply

● The problem of water pollution is growing ever more acute in the U. S., as population and industrialization increase along the waterways.

● The states are moving in on the problem, probably will come up with stricter laws before long.

● For an example of what companies have to do in the future, take the waste treatment plant that Oneida, Ltd., has just put into service.

The little town of Sherrill, N. Y., received a party of important visitors this week. The party was made up of New York state officials, including Gov. Thomas E. Dewey, and a contingent of conservation specialists and sanitary engineers from all over the country. They were in Sherrill to help dedicate an industrial waste treatment plant built by Oneida, Ltd., big silver-plating company that makes Community brand silverware.

Why did Oneida's plant get so much attention? First, because it is probably the most elaborate waste treatment facility in the country—in the variety of wastes it handles, the way it handles them, and its degree of automatic control. Second, the problem of water pollution in the U. S. has become acute enough to make almost any waste treatment operation worth looking at.

• **Progression**—If you do any traveling this summer, count the number of "Polluted" signs you see along the waterways. Or better, revisit a particular lake or river you knew as a boy. Its banks are now probably lined with industrial plants. The fishing isn't what it used to be. A small boy has to watch out for more than the truant officer if he feels like swimming.

Practically all U. S. waterways, large and small, have suffered and are suffering from pollution. It comes chiefly from two sources: residential sewage and industrial waste. As population increases and industry expands, the amount of waste products dumped into the water gets bigger. At the same time, the amount of water available to carry the waste decreases because demands for good water keep increasing. U. S. population has doubled since 1900; total water use has increased six times.

The pollution problem is enormous and extremely complicated. Men who

have dug into it recommend careful study by experts and close cooperation with state officials before anything is done.

• **Problems**—Industrial waste disposal is often as complex as industrial processes themselves. Even the experts don't know how to treat certain chemical wastes without great expense. Furthermore, technological progress continually develops new materials—and these, in turn, produce new wastes whose effects on the water and whose treatment requirements are not known.

Adding to the complication are the quality requirements for water in various areas. Sanitary engineers scowl whenever anyone mentions "pure" water. There's no such thing, except in a laboratory. Even rain falling from clouds picks up atmospheric dust. As it gathers in streams, it picks up soil particles. However, it's generally "pure enough to drink" until it comes in contact with human activities.

The engineers talk about varying degrees of usable water. While your creek may be polluted and unfit for drinking or bathing, it may still be usable for industrial cooling or navigation.

At the present time, practically all the states are hard at work in classifying their waterways. Once the classifications have been set, you can expect law enforcement to follow. That's one reason why you see so many industry representatives at conservation conferences these days. They are there to see how soon their plants will be affected and to pick up ideas on what they can do about the problem without putting themselves out of business.

I. Water Supply

Underlying all the talk about pollution is concern over water supply. The

problem of industrial water supply is inseparable from that of industrial waste disposal in areas where plants line streams. One plant uses water that another has finished with. Industry is thus faced with two problems: (1) finding sufficient water of suitable quality, and, (2) disposing of it in a manner acceptable to other users.

Basically, water is an economic resource. The availability of water—usable water—can make or break an area economically. You don't see many plants going up in the desert. And polluted water can check industrial expansion just as effectively as lack of water.

Unlike most natural resources, water will never be "short" in an absolute sense. There will always be more available. But it may be available at a price industry cannot afford to pay. If an industry has to pay prohibitive prices in any area, it may decide to move elsewhere.

• **The Cost**—Both the area from which an industry moves and the area into which it moves have problems. Take the case of North Carolina. It wants industry in the worst way. But should the state take an industry that will dump its dregs into streams and perhaps make the water unfit for other industries downstream?

Benjamin Cone, director of Cone Mills Corp., told a waste disposal conference in Raleigh last month that waste disposal is a statewide problem. If the state is going to hold police power on the entry of new industry, he felt, it should also give industries financial help for pollution abatement. Others at the meeting pointed out that Pennsylvania is already pioneering in direct state aid to municipalities for abatement work; industry profits indirectly.

• **Regions**—The Ohio River is one of the most polluted streams in the country. Into it pour the mine drainage and industrial waste of the Monongahela, the Allegheny, the Mahoning, and other tributaries. The resulting pollution is so serious as to discourage further industrial expansion. Factories in need of water for processing or cooling purposes are starting to locate elsewhere.

It's practically impossible to eliminate pollution entirely. But it is possible to make the water acceptable to more users. Industry has clearly lost the decision on whether it should stop spilling the dregs of its processing

into the nearest stream. That's pretty much agreed upon. The question now is how much industry can spill and how much it must pay to treat its wastes.

II. What Oneida Did

In the face of public interest in clean water, public relations is emerging as a key factor. Oneida, Ltd., may be leading the way in this new approach.

What Oneida has done is certainly not typical. The silverplating firm has spent close to \$1-million on what it calls an "Industrial Waste Purification Plant." The most it can expect to get out of the expenditure is about \$30,000 a year in reclaimed silver. That's less than the yearly operating expense of the treatment plant.

This means that the total expense of the new facilities has to be charged off to public relations and incorporated into production costs. Most other important waste disposal plants have been built with an eye on recoverable byproducts or reduced water bills through recirculation. With enforcement approaching, Oneida's type of solution may become more commonplace.

• **The Best Cow**—To understand why Oneida has taken the step at this time, you have to look into the company's close—almost paternalistic—ties with the community. Pollution was casting a dark shadow over this relationship.

The company's waste treatment work actually goes back to 1941. Prior to that time, Oneida had been discharging cleaning and plating wastes into the local creek. There were complaints, particularly in hard times. It was always someone's best cow that had been killed by polluted water. So the company built a lagoon into which it dumped all its wastes. The pollution settled, and water gradually evaporated.

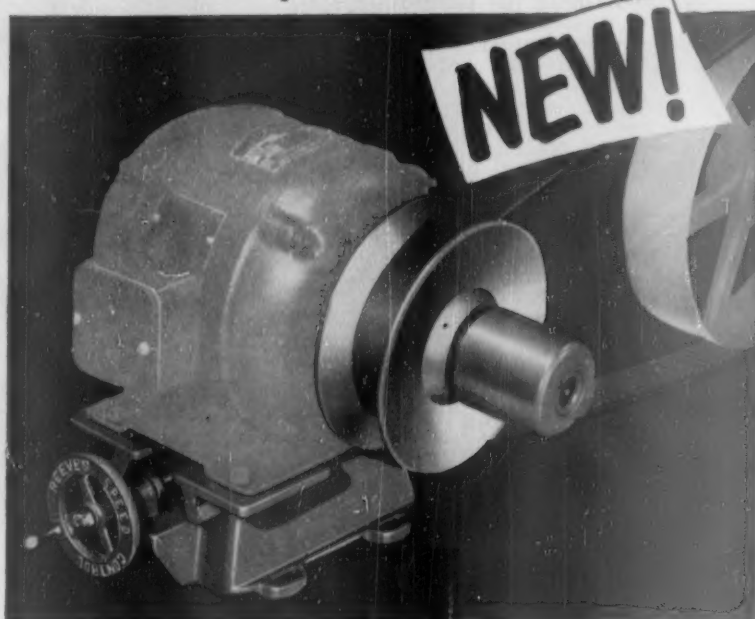
During the war, the company increased its plating activities. There were defense contracts, and new plating lines with new pollution sources came into being. The company added more lagoons, but it couldn't keep on doing so indefinitely. By 1951 there were over 15 acres of lagoons on the property, and complaints were still coming in from local trout fishers.

• **Solution**—In 1951, the company decided it wanted a permanent and complete solution to the problem. Chemical engineering consultants, Dr. B. F. Dodge and Dr. C. A. Williams of Yale University, were called in to check all the drains and run chemical tests.

The consultants, working with Oneida engineers and state officials, found that there were 38 different contaminants involved. These included soaps, oils, metals, sulphuric acid, nitric acid, hydrochloric acid, and cyanide. In the summer of 1952, the company built a pilot

REEVES

Vari-Speed Motor Pulley

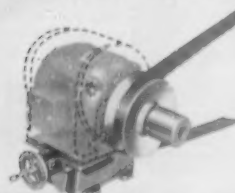


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plant and last year expanded it into the huge facility dedicated this week.

Instead of hiding the waste purification plant in a far corner of the property, Oneida has painted it brightly and made it one of the high spots of the regular plant tour. Thus, the plant began paying for itself through public relations almost as soon as it began operating.

III. Pollution Prevention

The type of job Oneida has done is what sanitary engineers have been preaching for a long while. They look at it this way: To pollute rivers, lakes, and bays, and then try to "purify" that water to usable condition is like locking the barn door after the horse is stolen. What's wanted is prevention rather than cure.



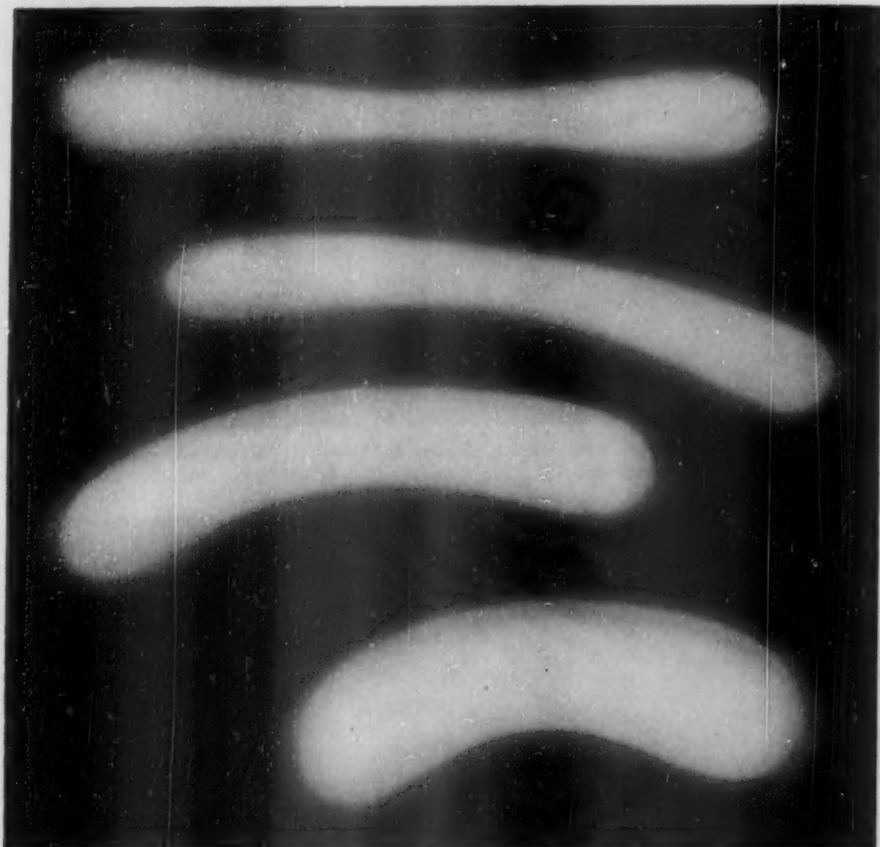
MIDDLE EAST gets boosted oil transportation, as Cities Service adds . . .

New Tanker Fleet

The ship skidding down the ways (above) is the second of four that will be launched this year by Cities Service Co. It slid into the James River at Newport News, Va., last week. Later this year, it will make its first voyage—to the Middle East, where it will load 14-million bbl. of oil, then head back to New York.

For Cities Service, this marks a change in its oil procurement policy. Up to this year, the company did all its importing from Mexico and Venezuela. Any Middle East oil that it sold in the U.S. market was purchased from other U.S. oil companies. Cities Service says that it has had trouble from time to time getting the quantities it needed.

Soon, with these four tankers on the water, Cities Service will be able to bring in its own oil—up to 500-million bbl. a year.



**How
glass by Corning
serves:**



LIGHTING—Not only street lighting, but various other lighting needs are filled by Corning's prismatic globes and lenses—railroad signals, for example, and airport runway markers, floodlights, automobile headlamps. If you have a lighting problem, why not write us about it?



PLANT EQUIPMENT—Immune to the corrosive action of most chemicals, PYREX brand heat exchangers and pipe handle liquids, gases and wastes in countless plants processing chemicals. Other special properties of glass work 'round the clock in many industries—in research and production.

These patterns shape your neighbor's life

They represent the shape of beams produced by the glass lenses of modern street lights.

They represent part of man's effort to roll back the night . . . to save lives, reduce suffering, dispel fear . . . to make streets and highways safer for your neighbors, and for you.

Nighttime accidents account for almost two-thirds of all traffic fatalities. Crime rates are three times as great after dark.

Modern street lighting—the creation of skilled lighting engineers—does much to reduce the violence and uncertainty that darkness breeds. Glass is the lighting engineers' helpmate in this task.

The light patterns shown here are for streets of various widths or for specific light locations. The patterns are created

by reflectors and lenses designed to put light where it will do the most good. These lenses are but one of many applications of glass by Corning designed to transmit and control light.

Controlling light is a science, better living is an art. Glass contributes to both.

How and why glass by Corning serves man so well is told in an attractive little booklet entitled "Glass and You." Whether you're concerned with product design and improvement from the artistic or scientific end, you may find in these copiously illustrated pages helpful ideas that may charge your imagination with some new solution of a bothersome materials problem. We'd be glad to send you a copy of "Glass and You" without obligation. Just write for one on your letterhead.



APPLIANCES—Glass adds sparkle and sales appeal to home appliances—easy-to-clean coffee makers, blender jars for hot and cold drinks, space heaters, gleaming food mixer bowls, for a few examples. The experience of Corning engineers and designers in solving glass application problems is yours for the asking.



CORNING GLASS WORKS, 20-6 Crystal St., Corning, N. Y.

Corning means research in Glass

Uncle Sam finds \$90,000 in warehouse!

There's a huge warehouse run by General Services Administration that's saving us taxpayers \$90,000 a year on materials-handling costs.

The secret is a new 1 1/4-mile cast-er trailer materials-handling system moving 105 feet a minute using cast-er stock selector trucks, and powered by only three 10-hp motors.



Texas does it like this!

In the vast Dallas warehouse of Central Freight Lines, a powered cast-er conveyor line whisks 6 million pounds of freight a day in and out. Floor trucks here have high-efficiency sealed Bassick casters to help them go places.

Caster lubricant sealed in

Bassick "3D99" sealed casters virtually eliminate lubrication problems while protecting swivel and wheel bearings from dirt and water. Lubricants cannot get out. This protects rubber wheel treads and eliminates hazards due to greasy floors.

GET UP TO 30% OFF!

Materials-handling accounts for 30% of total manufacturing costs. Whittle away at that 30% with a fast, economical handling system equipped with smooth-rolling Bassick casters.

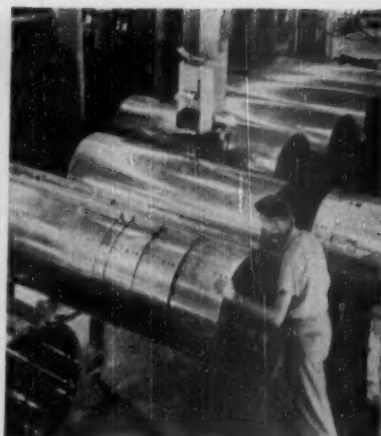


Write for facts to THE BASSICK COMPANY, Bridgeport 2, Conn. In Canada: Belleville, Ont.

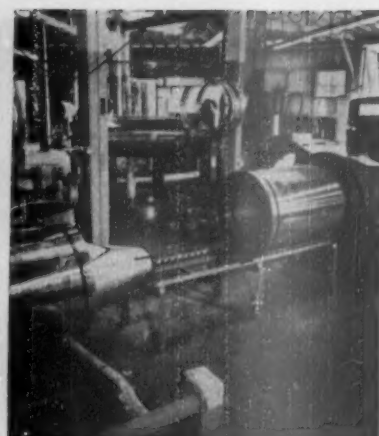


MAKING MORE KINDS OF CASTERS...MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP



1 For cheaper, safer shipping, unassembled jet fuel tanks are . . .



2 . . . nested, with nose and tail sections inside the center.



3 This way, components of six tanks are stowed in a single steel drum, with 252 tanks riding on one car. Assembled and crated (foreground), only 18 could ride.

Shipping Nested Fuel Tanks

Royal Jet, Inc., used to ship 18 jet wing tanks on a single railroad car from its Alhambra (Calif.) plant. Last week, the company figured out a way to ship 252 tanks in the same space.

When Royal Jet considered how much money it was losing in empty freight space by shipping assembled fuel tanks in bulky wooden crates, it decided to invest a little time in figuring out a better way to package its wares. By packing six unassembled tanks, each in three sections (above, left), into an airtight steel drum it now gets 14 times as many tanks onto a single railroad car. The company also finds the tanks are better protected during shipment. And the sealed drums are easier to handle than the wooden crates because they can be rolled by hand, lifted more easily by fork truck.

Though a drum costs more than one of the old wooden crates, Royal Jet figures it's 10% cheaper in the long run because each drum does six times as much work per trip.

If the company has to ship a batch of fuel tanks by air, the drums again save money. Where it used to take about 320 lb. of wooden case to ship one tank, it now takes 270 lb. of steel drum—a 16% freight saving per tank.

Each drum is 9 ft. long, a formed tube of 18-gauge mild steel; all joints are welded and circled with rings 2 1/2 in. high to reduce rolling wear on the drums (bottom picture).

R. T. Lowrie, Royal Jet's president, says the drums, which the company designed and manufactures, could revolutionize the concept of canning bulky parts for shipment.

PRODUCTION BRIEFS

More light into electricity: Wright Air Development Center, Dayton, Ohio, has come up with a second method for converting light into electrical energy. The Wright converter uses cadmium sulfide as its basic element; a 60-sq. ft. slab can supply an average house. The first converter—Bell Labs' solar battery (BW—May 1954, p100)—was based on silicon.

Detergents in sewage can be measured by a method worked out by the Research Div. of New York University's College of Engineering. The idea is to find out the amounts of household detergents, which are suspected of causing trouble in sewage treatment plants (page 78).

Tapered aluminum sheet is being produced since last week at Alcoa's Davenport (Iowa) Works. The plant, largest of its kind in the world, was leased by Alcoa from the Air Force. Its output will be used to cover the wings of the latest military aircraft.

No more broken glass: The borough of Brooklawn, N. J., has stopped worrying about the glass in its 60-ft.-long greenhouse. The American City magazine says the borough is using Plexiglas plastic panes now, with breakage reduced from about 200 panes a year to only two.

De-icing jets: United Control Corp., of Seattle, has evolved a new method of keeping ice from forming on jet bombers. Hot air is piped from the compressor section of the jet engine; Boeing is installing the equipment on its B-47s.

Atomic energy projects now have their own department at American Locomotive Co. Alco says it has been producing equipment for atomic purposes since 1947, and that the value of such production now tops locomotive sales in many prewar years.

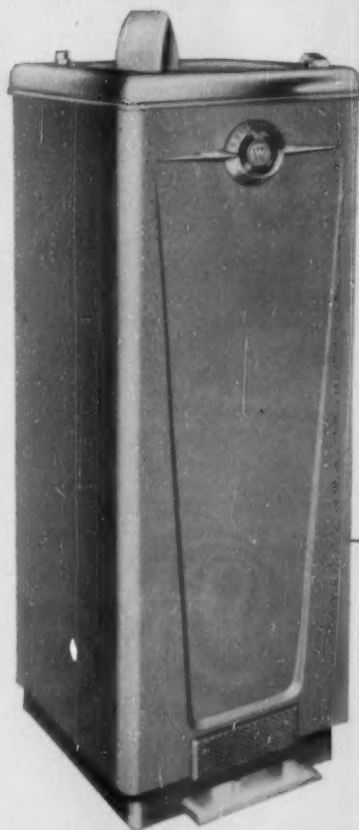
Helicopters, up and down: A new Navy anti-submarine helicopter was put through its paces off the Connecticut coast last week. It's the XHSS-1, a development of the Sikorsky Aircraft Div. of United Aircraft Corp. It is equipped with underwater sound equipment that can be lowered by cable for submarine detection—the first time a 'copter has been used for this purpose. . . . Piasecki Helicopter Corp. is suffering through an Air Force order that has grounded its workhorse helicopter, the H-21. A couple of accidents have prompted the Air Force to ask for modifications of the H-21.

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Throughout this wide land, retailers are helping to build good will by displaying the decal illustrated above.

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The man in the dark suit is Bob Dawson of Rohm & Haas Co. It's his job to tell engineers and designers what can and cannot be done with the plastics his company makes. Here, he's over at Admiral Corp., talking of Plexiglas. He's . . .

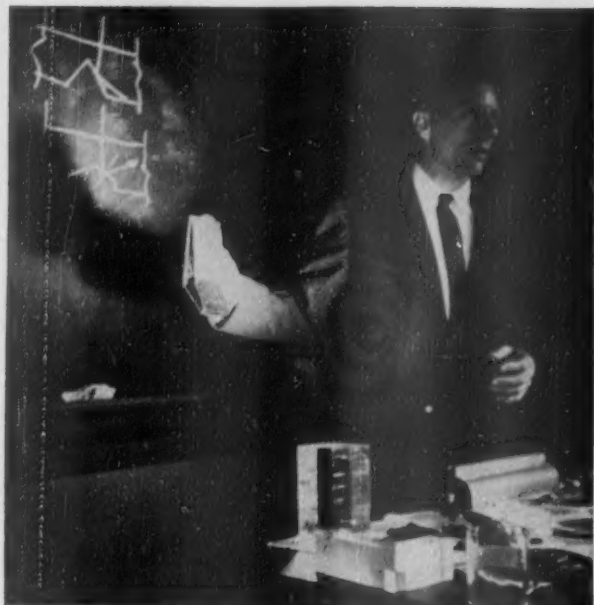
The Man Who

The young man in these pictures, Bob Dawson, is an industrial designer. He is on the payroll of Rohm & Haas Co. (Philadelphia), big producer of plastics materials. But he does not design for Rohm & Haas. He works with the designers and engineers of his company's customers—the manufacturers that use R&H plastics.

As R&H sees it, and as many other



CONFERENCE: Dawson talks with Admiral engineer R. L. Sanders, makes a . . .



LECTURE: Dawson analyses optical properties of Plexiglas for Admiral's men. "About 92% of the light comes through."



DEMONSTRATION: "Try it out for yourself. You'll see why we're getting into reflex camera lenses with this stuff."

Tells the Engineers About Plastics

plastics suppliers see it, Dawson's is a necessary job. Plastics are relatively new materials; still newer plastics appear on the scene almost every year, and older plastics continually find new applications. If these unfamiliar materials are to be sold successfully, somebody has to introduce them to manufacturers—explain what plastics are good for and what they aren't good for, point

out where they can help and where they might wisely be shunned, advise on the best ways of handling them.

That's where Dawson comes in. Working designers and engineers in industry don't have time to keep abreast of plastics developments, but Dawson does; it's his job. He keeps his company's customers and prospects informed. His knowledge helps push

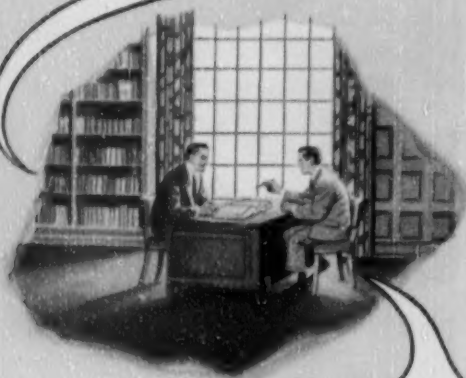
plastics into fields where they might otherwise have been ignored; for plastics are expensive, and manufacturers do not like to risk big money on trial-and-error operations. Dawson also keeps plastics out of places where they don't belong—where misapplication might give them a bad name.

• **Plexiglas**—The plastic that Bob discussed with designers and engineers at



SUGGESTION: "If you made its face of Plexiglas instead of polystyrene, you'll be able to get a sort of glow around the knobs and lettering. It'll cost more, but it may be worth it to make the Admiral name stand out a lot more clearly."

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telephone business office or see Standard Rate and Data (Consumer Edition)



the Radio & TV Div. of Admiral Corp. (pictures) was Plexiglas, one of the best-known trade names in the industry. But Plexiglas, like a lot of the lesser-known plastics, is often used without understanding of what it can and cannot do.

Plexiglas is the material that came into prominence during World War II for aircraft turrets and bomber noses. Its major selling point is optical clarity. It's used, for example, in some camera lenses where you don't want distortion around the edges. Hundreds of companies use it for escutcheons and nameplates on their products. The auto industry has taken it up in a big way for tail-light lenses, horn buttons. There are 32 separate Plexiglas pieces on this year's Chevrolet. Chrysler Corp. has been using the material since 1940.

• **Service**—Soon after the war, when Rohm & Haas began scouting around for civilian markets for this premium product, it ran up against the problem of technical ignorance among users. The problem was not unique with the company, practically every materials supplier was up against the same thing—and still is.

All of the big names eventually set up what amounted to consumer service departments. Customers would present problems, and the materials suppliers would help work out solutions (BW-Apr. 10 '54, p. 100). The Rohm & Haas program fits into this general pattern, but it has some unusual aspects.

• **Seminars**—In the last year, R&H designers like Bob Dawson have visited more than 100 major industrial plants. At each plant, they have conducted a design seminar. This takes up most of a morning. It consists of a short, layman's-language discussion of the material. With Plexiglas, the discussion goes into molding of the plastic to get particular optical effects, expansion problems, color, decoration, and fastening.

The talk is not limited to the good points of the material. Over half the discussion between Dawson and the men at Admiral concentrated on what you can't do with the material. The material can't take high temperatures. It scratches. The marks can be buffed out quite easily, but this presents certain design problems in placing faces and ridges. Along with the talk, Dawson passed a suitcase full of good and bad examples around among the audience.

After such a talk, the meeting gets down to cases. The designers and engineers bring up specific problems they have on the drawing boards. These are talked over, and Dawson or the other Rohm & Haas people offer suggestions. The discussion sometimes moves to the company drafting boards. The product may go back to Philadelphia later for careful analysis.



If you're now drawing, forming, punching, assembling, polishing and painting *big parts* from conventional materials, there's no question but what General American's "one-shot" molding service can help speed your production—lowers costs, too. Find out how plastics correctly applied can improve your products with greater strength, lightness, variety of design, molded-in color and fine finish. Ask a General American engineer all about it!

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anywhere: injection presses to 300 ounces, compression presses to 2,000
tons, reinforced plastics molding, die making, painting, assembly, packaging



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GENERAL AMERICAN
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135 South La Salle Street • Chicago 90, Illinois



Rockwell Report



by W. F. ROCKWELL, JR.

President

Rockwell Manufacturing Company

IN TIMES OF ECONOMIC ADJUSTMENT it is almost impossible to pick up a newspaper or magazine without seeing someone's estimate of what the future holds. Whether these prognostications are optimistic or otherwise depends on many factors, not excluding the prognosticator's political sympathies and, possibly, the state of his liver.

For some of our people, however, looking into the future is a day-after-day job, regardless of whether times at the moment happen to be good or bad. We call it Engineering for Growth.

It is part of the responsibility of our research and development people to think habitually in terms of five to ten years in the future. In that state of mind it is their job to become more than casually familiar with every new basic scientific discovery or development, and to attempt to answer a series of questions stemming from it.

How will it affect the way people live? How will it influence the usefulness of our present products? What new fields or opportunities will it open up? Can we identify ourselves with these new opportunities—are they compatible with our experience and over-all structure? If so, how should we get in: buy in, or build from scratch?

These questions and their answers are then reviewed by our over-all research guidance committee, made up of engineering, production, sales, finance and management people—to determine what concrete further action shall be taken. When this committee approves a specific long-term project, it uses as a standard the probability of success divided by the time and money needed to complete the project.

In April we introduced our new Delta 10" radial arm saw, which combines the accuracy and versatility of the traditional radial saw with the easy mobility of portable electric saws. The new product was engineered with building contractors in mind, since it can be used outside to start a house, carried inside for finishing work, and to the shop for pre-cutting trim, cabinets, etc. Builders have welcomed it, as we hoped they would. But the surprising thing is the extent to which it is being bought by hobbyists who want the highest degree of accuracy and versatility in a radial saw that will fit comfortably in a home workshop.

Most of us can thank our competitors for making us more effective than we would be without them. A case in point involves the recent advertising of several manufacturers emphasizing the use of powdered metal bearings in a product competitive to one of ours. Customers mentioned it to us. Actually, our product has been equipped with this type of bearing since early 1945—so long that we had come to take it for granted, and had stopped talking about it. Needless to say, we're talking about it again.

Because our present company name was adopted as late as 1945, people not too familiar with us sometimes have the impression we are a relatively new organization. Actually, we are in our 28th year of operation, and some of our basic companies are considerably older than that. Rockwell Tools, Inc. was founded in 1852, Pittsburgh Meter Company in 1886, Edward Valves in 1900, National Meter Company in 1868, to mention only a few. The name change, incidentally, became advisable when our broad product diversification made our old name (The Pittsburgh Equitable Meter Company) outmoded and somewhat misleading.

One of a series of informal reports on the operations and growth of the
ROCKWELL MANUFACTURING COMPANY
PITTSBURGH 8, PA.

for its customers, suppliers, employees, stockholders, and other friends



NEW PRODUCTS

Brainy Furnace

By dint of a gadget called a carbohm, it regulates carbon content of steel during heat treatment.

Leeds & Northrup Co. has developed an electric furnace that measures and controls the carbon content of the steel it's processing through all stages of its operation. This means that you can form intricate components from easy-to-handle low carbon steel, then put them in the furnace to toughen them up.

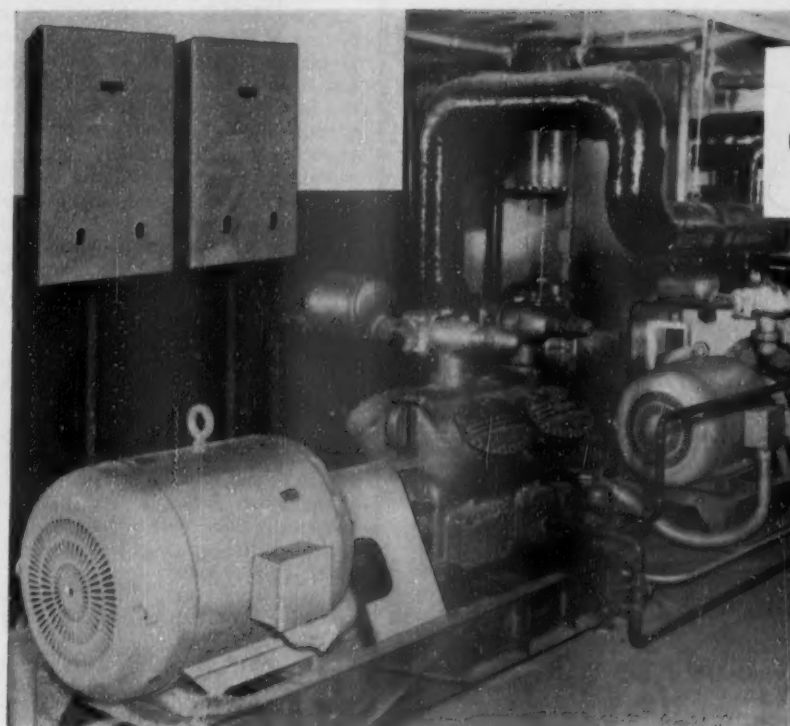
So far, the furnace has been used to turn out small, hard steel parts for such equipment as business machines, cameras, rifles, and sewing machines. Usually, these parts have to be forged, then machined. And frequently this machining is difficult and expensive. Sometimes it's impossible, especially if the part is particularly intricate—with lots of small precision holes, severe bends or ridges. When you come up against such a part, you have to make it in sections. This adds assembly costs to the high machining costs.

Leeds & Northrup says that its new furnace greatly reduces this machining and assembly time. Sometimes it eliminates the time altogether.

• **How It Works**—High-quality steel is dependent upon its carbon content. The more exact the control of carbon during the heat-treatment process, the better the product that's turned out. L&N's furnace has a little gadget called a carbohm built inside it. The carbohm measures and controls the amount of carbon in the atmosphere of the furnace. It is made of an alloy steel, and it reacts to the furnace atmosphere just as the steel that's being heat-treated does.

When the carbohm is exposed to carbon at heat-treating temperatures—1,450F to 1,750F—it does one of two things. If there is more carbon in the atmosphere than there should be, it absorbs carbon. This increases its electrical resistance. If there is less carbon than there should be, it gives away carbon to the atmosphere. This decreases its electrical resistance. A control device is hooked up with the carbohm; when the control sees a change in resistance—either up or down—it knows whether to put more carbon in the furnace's atmosphere or to take some out.

The L&N furnace also controls the cooling of parts that are being heat-treated. With older methods of cooling, you have to transfer each part through



Two 50 hp Wagner totally-enclosed fan-cooled motors with increment starters installed at the Campbell House, Lexington, Kentucky.

Wagner®
ELECTRIC MOTORS
... the choice of leaders
in industry



to relax in cool comfort...

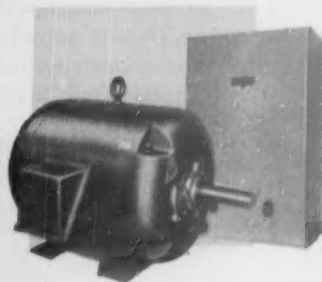
A moment of relaxation at the bar in Lexington, Kentucky's well-known Campbell House is doubly enjoyable because of the modern air conditioning system that cools this fine hotel.

Air conditioning installations provide cool comfort for modern living, but often present the problem of a drop in line voltage caused when powerful compressor motors start. This across-the-line starting is frowned upon by many power companies because the line voltage disturbance can cause difficulties for neighboring power users.

The Wagner Increment Motor and Starter Combination, like that installed at the Campbell House, solves this problem—and economically, too. This combination

limits the inrush of motor current to values that are acceptable to most power companies and eliminates the need for expensive auto-transformer starters or resistor starters. Power companies and their customers *both* benefit when the Wagner Increment Motor and Starter "package" is installed.

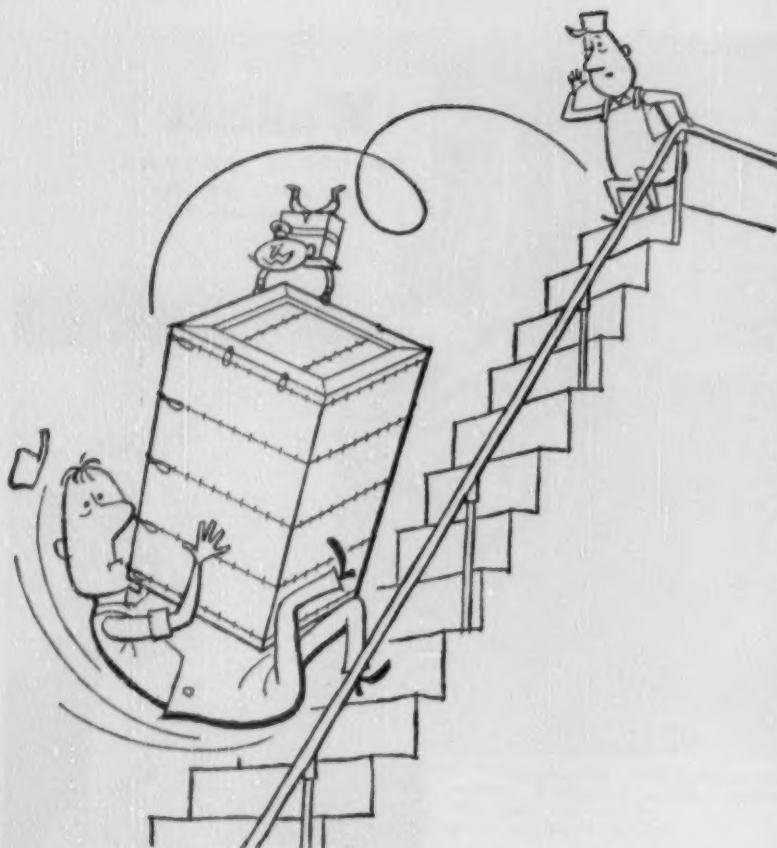
Whatever your motor problem, Wagner has the *right* answer. Let a skilled Wagner engineer discuss your motor needs with you. Call the nearest of our 32 branch offices, or write us.



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**"Don't worry, Joe ...
it's packed in a General Box!"**

Your product arrives safe and sound—wherever it goes—when it's wrapped in the tough protective shell of a General Wire-bound Container. Expert packaging engineers make *sure* of that in our designing and testing laboratories.

Why not let them design a lighter, stronger, *safer* container for *your* product. There's no obligation and no charge for this service. Have one of our engineers call. And send for your free copy of "The General Box." It's full of cost-cutting packaging ideas.

ENGINEERED CONTAINERS FOR EVERY SHIPPING NEED.

Factories: Cincinnati, Denville, N. J.; East St. Louis; Detroit; Kansas City; Louisville; Milwaukee; Prescott, Ark.; Sheboygan; Winchendon, Mass.; General Box Company of Mississippi, Meridian, Miss.; Continental Box Company, Inc., Houston.

General Box

GENERAL BOX COMPANY, 1805 MINER STREET, DES PLAINES, ILL.



an uncontrolled atmosphere to an outside quench tank. In doing so, you run the risk of changing the metal's physical properties. To get around this, L&N has built its quench tank right into the furnace; the parts are not exposed to uncontrolled atmosphere until the whole operation is finished.

• **Who's Using It**—A firearms manufacturer—L&N's first customer—has put the furnace to work turning out action bar locks for shotguns. These locks used to be forged and machined from high carbon steel stock. They were expensive to produce this way, so the company tried to turn out the part by press-forming it. That didn't work, because it ruined a new set of dies every few days.

The company next decided to try a new metallurgical approach: forming the part from low carbon steel, then replacing the carbon to get maximum hardness. This process took 17 hours, not bad by previous standards. But there was no satisfactory way to control the operation so that the results would be consistently good. Rejects ran as high as 90%.

When the company tried out the L&N furnace, it found that it could produce the part it wanted in four hours, save a lot on rejects and inspection time.

• **Typewriter**—L&N says that International Business Machines Corp. has put one of the furnaces to work to heat-treat a small part for its electric typewriter. The part has three right-angle bends in it, and it has to be able to stand up under impact and friction. This gave IBM the same sort of problem that the firearms manufacturer had. The part kept breaking during production.

Then one of IBM's engineers heard about the L&N furnace. A test batch of the problem part was put through one of L&N's furnaces in Philadelphia. It came out well, so IBM plunked down \$13,000 for a furnace of its own. Now it's using the furnace in its plant at Poughkeepsie, N. Y.

• **Source:** Leeds & Northrup Co., 4901 Stenton Ave., Philadelphia 44, Pa.

Continuous Performer

National Acme Co. introduced a new machine last week that may bring the turret lathe one step closer to automatic operation. Its 12-in. Universal Model MC single-spindle chucking machine performs ten machining operations without stopping. Thus, no time is lost from the start of the machining sequence until the operator unloads the finished piece.

This is the largest single-spindle automatic now being made by the company though an 18-in. model is in the design stage. National Acme says the

machine will be easy to adapt to an automated production line.

The speed of the spindle can be varied from 25 revolutions per min. to 1,487 rpm. The unit is powered by a 25-hp. motor.

National Acme expects to begin delivery of the machine in November. Price \$22,000.

• Source: National Acme Co., 170 E. 131st St., Cleveland, Ohio.

NEW PRODUCTS BRIEFS

A journal bearing that can be used on any kind of freight car has been introduced by Timken Roller Bearing Co., Canton, Ohio. The bearing eliminates the need for a journal box and is substantially cheaper than earlier types.

An electronic multiplier that works from punch cards, checks its own accuracy without slowing down, has been announced by Underwood Corp., 1 Park Ave., New York. The machine processes information at the rate of 7,200 cards an hour, despite the complexity of any calculation.

Photographs that look too gray can be given more contrast by a new device announced last week by Fairchild Camera & Instrument Corp., Svosset, Long Island, N. Y. It's called the Fairchild Variable Response Unit.

Interoffice memos can be turned out faster by the Azograph process, says A. B. Dick Co., 5700 W. Touhy Ave., Chicago, developer of the process. The company claims that Azograph can do the same job that's done by mimeographing or similar processes.

City water will taste and smell better through an inexpensive control developed at the North Texas State College Div. of Science, Denton, Tex. A powder does the trick. Its developers say that Oklahoma City is using it, and that it saved \$5,000 there in a single month.

A giant coal stripping shovel—as high as a 12-story building—is being built by Marion Power Shovel Co., Marion, Ohio, to dig coal seams in western Pennsylvania. It will be 50% larger than any existing equipment of its kind, will cost \$2.5-million. The purchaser will be the Hanna Coal Co. Div. of Pittsburgh Consolidated Coal Co.

A carpet of foam rubber and cotton has been introduced by Hewitt-Robins, Inc., Stamford, Conn. Made from scattering size up to wall-to-wall carpeting, it can be washed with soap and water.



Too many parts in your products?

Could be—in the light of new developments in Durez phenolic plastics.

Yet cutting down on parts is often only the kick-off benefit of product development with these materials. Others can be lower material costs, lower production costs, reduced shipping weight, less breakage or damage in handling, better service in use, improved appearance, and greater sales appeal.

Known with good reason as the work-horse of the engineering plastics, phenolics have been the specialty of

Durez for more than three decades... we are exceptionally qualified to counsel with your design engineers and molders in applying them most profitably to your business.

Molex Products Co. hit the jackpot in eliminating parts by redesigning this Morton's salt tabler dispenser. Could you do as well—in this or other benefits of modern phenolics application? We'd like to help you find out.

Durez Plastics & Chemicals, Inc., 4006 Walck Rd., N. Tonawanda, N. Y.





MOLDING COMPOUNDS. Structural, electrical, and chemical properties in many combinations.

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for the new
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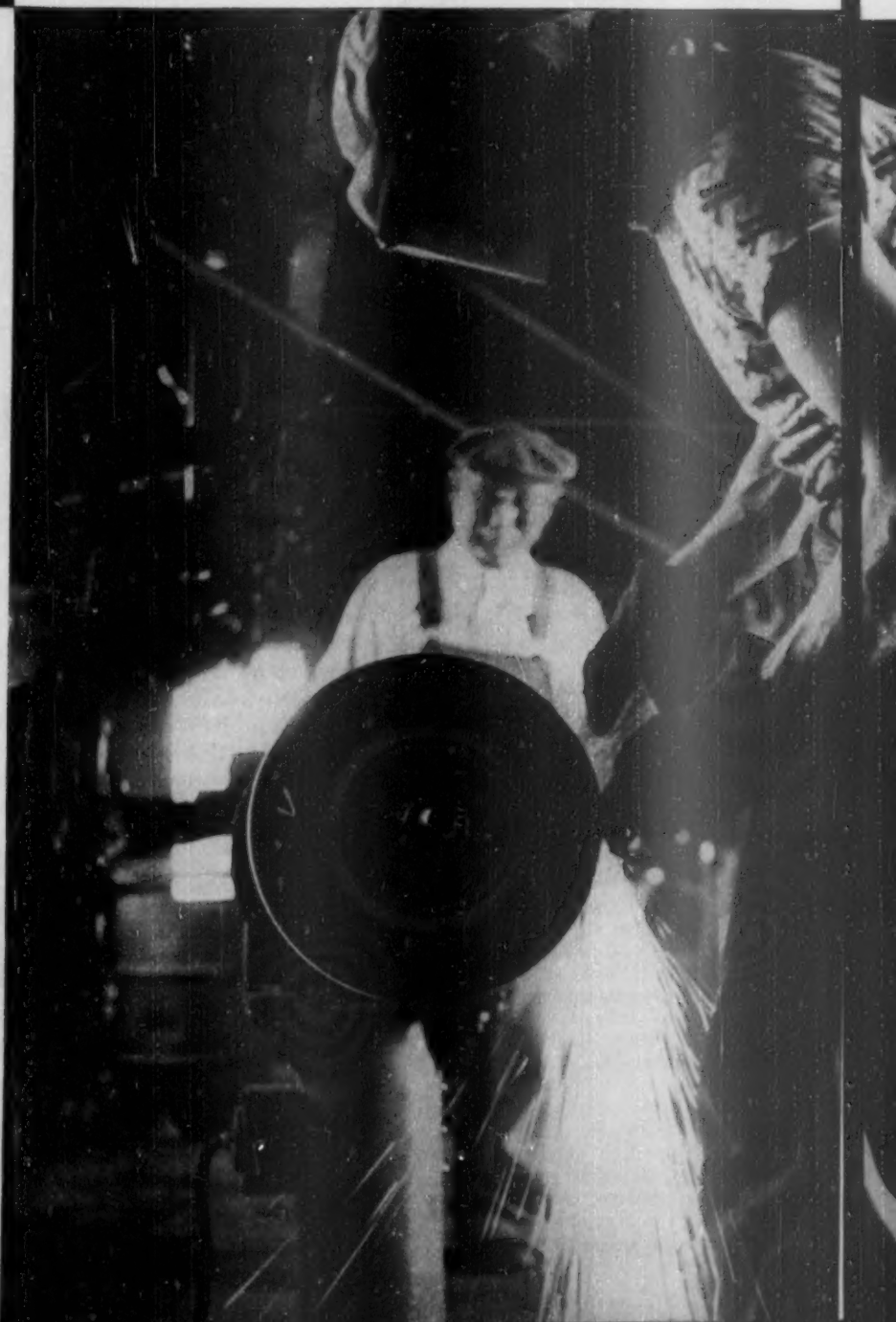
RESINS FOR INDUSTRY. Bonding, casting, coating, laminating, impregnating, and shell molding.



The Blacksmith Forges A New Farm Niche

The hammer-and-anvil days are gone—and the blacksmith almost went with them. But in the past 20 years men like Nebraskan John Potthoff stopped fighting the industrial revolution and hopped aboard.

The village smithy would never recognize today's shop—a maze of modern machinery that makes the blacksmith the Mr. Fixit of mechanized farming—smith, welder, and machinist.



While the rest of the business community is beating its brains over a recession, one sturdy band of entrepreneurs—the country blacksmiths—is looking forward to one.

Call them grim reapers if you will, but smiths like John Potthoff (pictures) will tell you that it's a quirk of the trade that the blacksmith prospers when things get tough. When the farmer—his best customer—is riding high, he'll buy a new part or machine when an

implement sours or breaks. When the going is hard, he'll hustle to the nearest blacksmith shop for a repair job.

The fact that the farmer still looks to the blacksmith as the town's official Mr. Fixit—that the blacksmith is geared to handle the complex trappings of today's mechanized farming—is a measure of how far these artisans have come since the hammer-and-anvil era, and of the vigorous readjustment of a little industry that refuses to be killed off in

the wake of industrial modernization.

• **By a Thread**—A while back a publication of the Nebraska Blacksmiths', Welders', and Machinists' Assn. printed a jingle that went:

Under the spreading chestnut tree,
The village blacksmith snoozes,
No horse, since 1923,
Has been to him for shoeses.

The wry parody shines more for fancy than for fact. The blacksmith has not snoozed his way out of existence—



CUTTING angle iron shapes is the sort of special job the smith tackles but . . .



WELDING a hard point on a plowshare is more the blacksmith's stock in trade along with . . .



REPAIR work on anything from a porch railing to the car muffler arriving above.

Business thrives on credit, both getting and giving. Yet in giving credit, a business may as a result find itself in **need** of more ready funds. To handle larger credits or for any other sound reason could your business use more **cash?**

Through Commercial Credit's flexible method, hundreds of companies have obtained added cash—as little as **\$25,000 or** as much as

millions. The total we advanced for working capital purposes alone last year amounted to more than 600

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BLADES get the sharp-eyed onceover of John Potthoff, dean of Nebraska smiths.

though his future was nip-and-tuck a few decades ago.

Back in the 1930s it was a contest whether the depression or technological extinction would snuff him out first. But before either could triumph the war and postwar years of the 1940s came along to rescue him. The blacksmith became a vital link in the food production chain, picking over scrap heaps and performing ingenious feats of makedo to keep overworked, overage farm machines from complete collapse.

• **Still Extant**—Where does the blacksmith stand today? One clue is a rash of recent offers of free space and other inducements from a flock of small communities to lure a blacksmith in.

Today there's a blacksmith in every third farm town, compared with one in every town years ago, according to the Nebraska association. The exact national total is anybody's guess. The state group, which hit a peak of 1,200 members and a low of 87 in 1935, now numbers 180. (It has a mailing list of 780, including men who are exclusively welders or machine shop operators.) The ranks have thinned over the years, but the craftsmen who remain have forged a new niche where they are solidly entrenched.

• **New Role**—The blacksmith's secret of survival has been a readiness to shed old skills—some of them dating to civilization's early morning—and to don new ones. He stopped fighting the industrial revolution to become a mechanized instrument of the machine age.

In the smaller communities where most of the species is found, the blacksmith today is the town machine doctor. While his anvil has collected rust, he's been busy turning welder and machinist. He's a one-man machine maintenance industry, who can do anything from sharpening blades to shaping iron work for truck stock racks or

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Victorian Room
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THE NEW YORKER	THE TOWN HOUSE
<i>In Washington, D. C.</i>	<i>In Dayton, Ohio</i>
THE MAYFLOWER	THE DAYTON BILTMORE
<i>In St. Louis, Mo.</i>	<i>In Albuquerque, New Mexico</i>
THE JEFFERSON	THE HILTON HOTEL
<i>In Columbus, Ohio</i>	<i>In San Juan, Puerto Rico</i>
THE DESHLER HILTON	THE CARIBE HILTON
<i>In Fort Worth</i>	<i>In Madrid, Spain</i>
and El Paso, Texas	THE CASTELLANA HILTON
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Hilton guests around the world enjoy a wide variety of fine food served in attractive settings, ranging from popular priced coffee houses to distinguished dining rooms. With their high culinary standards, superb service, comfortable accommodations and convenient addresses, Hilton Hotels offer the utmost in perfection. Although each hotel possesses its own character and individuality, the quality and hospitality are traditionally the same throughout the entire group.

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Merchandising's most modern methods work best in National's Long-Span Multiple Buildings

When the time came to pick a building design for suburban Cleveland's modern new Meadowbrook Mart, the most logical choice—from every standpoint—was a Stran-Steel Long-Span 50 Multiple building, 152 feet wide and 642 long.

First consideration was floor space, and the choice was strongly influenced by the Long-Span's provision of a maximum amount of unobstructed interior area—in the Mart's case, over 91,000 square feet . . . enough for the more than 100 retail businesses that make it an outstanding service and shopping center.

Second was construction costs. Long-Spans go up rapidly and easily, so the

Mart's owners made appreciable savings in time and money by their choice.

And finally, Long-Span was chosen because it easily lends itself to adaptation and modern treatment, as shown by the illustration of the Mart above.

The Long-Span Multiple, a product of the Stran-Steel division of Great Lakes Steel, fits into any site or any application—farm, industrial, or commercial—as readily as it did for the Meadow-

brook Mart. Straight sturdy sidewalls and arch roof give a maximum amount of unobstructed space. Arch ribs and trusses of famous N-A-X High-Tensile Steel make for long life, strength and economy.

All-steel buildings are but one of the many special and standard National Steel products that serve many industries in many ways . . . that make National Steel one of America's leading producers of steel.

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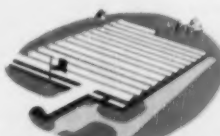
HANNA IRON ORE COMPANY
Cleveland, Ohio. Producer of iron ore from extensive holdings in the Great Lakes area.



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TOMORROW'S TRUCK TODAY...

Its owners prove this statement!

5 YEARS AGO The White Motor Company introduced an entirely new type of truck—completely functional—designed to reduce delivery cost because it could do more work per day or per mile. So new and different, other manufacturers thought the White 3000 of little consequence, at the time.

TODAY... just five years later... thousands of successful fleet owners have cost records to prove that the White 3000 reduces delivery costs spectacularly. The White Roll Call of owners of ten or more is published as unassailable proof of this fact.

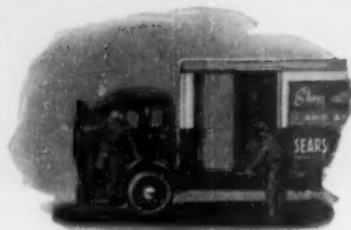
The highest compliment that can be paid an entirely new product is that other manufacturers attempt to imitate it when its success has been proved. However, there is only one White 3000—the others will always be imitations.

If you have not had the White 3000 demonstrated in your service—to see for yourself its ability to cut your delivery time and costs—call your White Representative today.



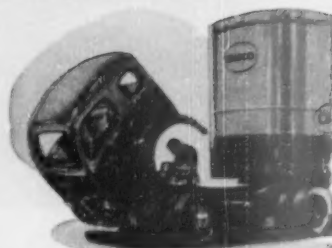
Wide-angle Safety View

Every way you look, you see more, save traffic time... avoid accidents. Drivers gain extra visibility, new driving ease.



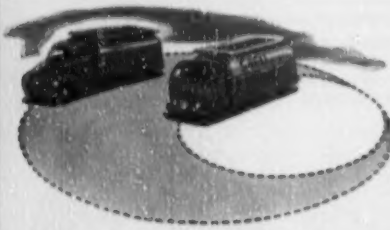
One-Step Cab... Low-bed Frame

Fewer steps... less reaching and stretching because of the White 3000 functional design that saves time and energy in every element of delivery service.



Safety Power-Lift Cab

Only White has the patented power-lift cab that provides complete front-end accessibility in seconds... for substantial maintenance savings.



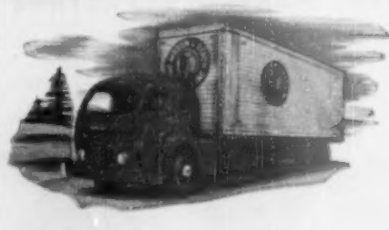
Time-saving Maneuverability

Wider-tread front axle, short turning radius and short wheelbase combine to provide amazing maneuverability... save driving time.



Space-saving Design

Short wheelbase and functional design permit body 2 feet longer without increasing overall length. Greater body capacity... more deliveries.



3000 lbs. More Payload

New weight distribution shifts weight forward for more payload. White 3000 design also permits longer trailer within 45 ft. overall length limit.

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FOR MORE THAN 50 YEARS THE GREATEST NAME IN TRUCKS

converting horse-drawn wagons into trailers.

In larger communities he's more often a specialist than a general physician—concentrating on welding, repair and sales, lawnmower sharpening, or even fancy iron porch railings.

• **Into the Gap**—The blacksmith's efforts to gain a new toehold have been powerfully boosted by the snags and drawbacks in modern manufacturing and distribution techniques. Mass production output is general, impersonal, and vulnerable to delays. A customer's needs are individual, specific, and pressing. In the gap between, the blacksmith makes a living.

Take plowshares. Manufacturers turn out models that are widely adaptable, but not perfectly suited to any one type of land. The blacksmith moves in to make the machine fit the terrain. In loamy, rock-free soil, he welds on a point of hard alloy metal—that will keep a share going about six times longer before it needs resharpening. On a muddy farm, he smooths the shares to a shine, so the soil won't stick as it's turned over.

Snafus on replacement parts also help line the blacksmith's pockets. The farm town implements dealer is a small operator. He can't begin to stock all the replacements for the array of machines in a stack of makers' catalogs. Yet a two-week wait for delivery can wipe out a year's work for a farmer. The blacksmith, on the other hand, can move fast and nimbly. Some smiths—such as Edwin Braaf, past president of the Nebraska group—have their welding gear mounted on a trailer so it can roll right into the field when a machine is down.

• **Repairs**—Moreover, often blacksmith repair work has the edge over replacements dollar for dollar. Braaf tells of a fellow who priced new hinges for the trunk lid of his car at \$3.50 each. Braaf heated the sprung hinges, gave them a tap on the anvil with a hammer and they were good as new. Price: 50¢.

Such repairs, which account for a big chunk of the blacksmith's income, can mean the difference between saving and discarding a machine to the farmer. Farm machinery is notably long-lived, but models change and manufacturers drop parts production for their older numbers.

• **Mechanized Shop**—What with all the changes in the blacksmith's bailiwick, the village smithy would hardly recognize the modern shop—and would do a doubletake at the sum invested in tools. John Potthoff, dean of Nebraska blacksmiths, opened shop in 1907 with \$200 worth of tools. The modern version calls for a \$5,000 investment and can, with no effort, run that up to \$10,000.

Today's forge is apt to run on natural gas instead of special coal, which has pretty much priced itself out of the



We got paid \$122,500 although our factory was idle!

**How Hartford Business Interruption Insurance
paid off during our five-month shutdown**

(Based on Company File #TC-51-1087)

A fire at our main clothing factory
snarled our entire operation.

We couldn't use the building until
extensive repairs were made. And
we couldn't find another that could
be used temporarily. We had no
choice but to remain idle.

Many of our expenses, of course,
went right on. Frankly, I wonder if
we could have met them all without
Business Interruption Insurance.
It paid us \$122,500 between the
time of the fire and the date we got
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A period of enforced idleness can play havoc with the finances
of any company, large or small. *Yours*, for example.

Why leave yourself open to a crippling loss of income when
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Insurance carry the load.

Your Hartford Fire Insurance Company Agent or your
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Call him—today.

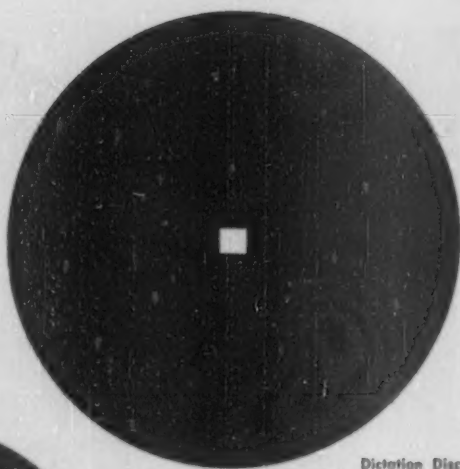
Year in and year out you'll do well with the

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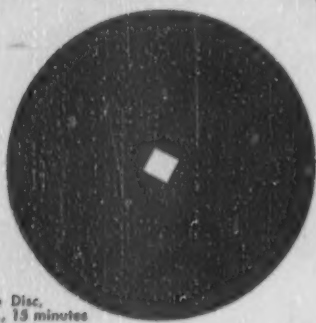


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33 $\frac{1}{3}$ rpm*
make this
MORE THAN
the finest dictating
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Dictation Disc,
5 $\frac{7}{8}$ " diam., 30 minutes



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Memo Disc,
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Sound Scriber
DICTATING EQUIPMENT

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**WORLD'S MOST VERSATILE
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- * Discs Play on Standard 33 $\frac{1}{3}$ Phonograph

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Please send sample Disc and info.

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Nebraska market. And it's almost lost amid a small jungle of clattering, blazing machines—an electric arc welder, acetylene torch, turning lathe, electric drills, power grinders, and a flock of others.

• **Volume**—The necessity to mechanize his shop has turned the blacksmith's thoughts to bigger-volume business. That's one factor behind a trend toward fewer shops and a migration to the larger towns—preferably the county seat. Shops feel they need a larger field to draw on.

Incomes tend to vary with the shop, but Braaf figures most shops gross from \$5,000 to \$10,000 a year—and net about 50% of that amount.

From year to year prosperity vacillates in a paradoxical pattern—best when times are hard or the weather's foul. A withering drought reaps the blacksmith a fat harvest of plow sharpening jobs. Monthly income hits a peak during fall plowing and again in spring.

• **Eager**—As a group, these craftsmen are alert to any move that will build their trade. Having barely escaped extinction once, they are determined to stave off any future threat. They eagerly latch onto any constructive suggestion of their association. With only a nudge from that body, they went to work cleaning up their shops. The old buildings with their swaybacked roofs and smoke-blackened interiors, they feel were poor public relations. Today's shop may not be beautiful but it's a big improvement—even boasts a floor.

The blacksmiths' annual conventions are less an outlet for hijinks than a trade school. Manufacturers set up classes in use of new machines and demonstrate new techniques. As men mastering crafts that are new to them, the blacksmiths listen attentively. Those who came up via the welding route, mostly younger men, prep intensively in the arts of blacksmithing.

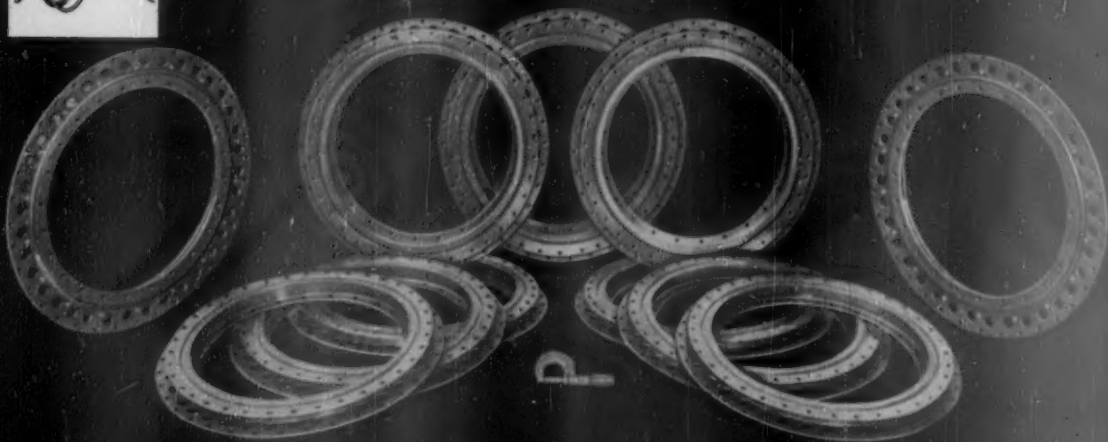
The association also has taken action in fixing prices to cut down battling among members. The price for pointing plowshares, for example, is a uniform \$1.50. Potthoff can remember when he got 20¢ for the same job.

• **Turnabout**—One ancient aspect of the trade has taken a new lease on life in recent years. Despite the jingle, horseshoeing is again proving a bonanza for the few blacksmiths around who still recall the art. This time, it's the riding academies and the spurt of interest in owning horses for recreation that is responsible. The rare horseshoeing blacksmith finds business flowing in from all surrounding states—riding academies will send in a couple of truckloads of animals at a time. Braaf speaks for the new breed of blacksmith when he says, "I could pick up a pile of money if I only knew how to shoe horses."



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11.375" x 16.000" x 1.062"

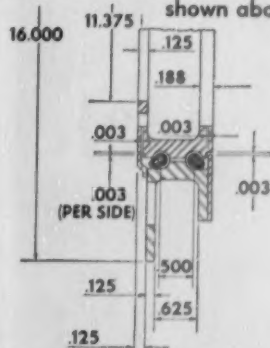
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Details of thin section bearings
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COMPANIES

Dr. Edwin H. Land (cover and right), Polaroid Corp.'s 47-year-old president, started out as a research director, founded Polaroid in 1937 to produce his exclusive optical coating for sun glasses and visors. Now his company is marketing a triple line of picture-in-a-minute cameras, ranks fifth in the industry. The researcher is . . .



Marketing a Camera Revolution



J. H. Booth, executive vice-president, handles the business end of Polaroid.

Six years ago, Polaroid Corp. of Cambridge, Mass., staged a quiet revolution in the photographic industry with a camera that developed its own pictures. Last week, Polaroid added the final touches to a now unquiet revolution by launching the Highlander, a moderate (\$69.97) priced version of the picture-in-a-minute camera, in a two-week, \$435,000 promotion campaign in 15 major U.S. cities.

Dealer meetings for the drive got a personal touch from 120 Polaroid employees—from vice-presidents right down to engineers and secretaries—who barnstormed across the country. The tourists, working in eight teams, took orders, gave out dealer kits, followed up with visits to stores. The city-by-city promotion of Polaroid's original camera, the Speedliner (\$89.75), took six months to complete; in two days the Highlander campaign covered cities representing 69% of Polaroid's camera business.

• **Brink of Bigness**—The man behind Polaroid's bid for a new and expanding camera market is Dr. Edwin H. Land (cover and above), the company's 47-year-old president, who has steered the small company to the brink of bigness.

Land was already a recognized inventor before he graduated from Harvard in 1930. When he founded Polaroid in 1937 he considered it primarily a research company. His inclination was to develop a physical or chemical principle and then let somebody else worry about finding a market for it. But Land had too much commercial sense to stop there.

"I planned a company," he says, "in which I could work scientifically and still have my inventions used." Polaroid and Land have had no hesitancy in marketing a revolutionary idea like the picture-in-a-minute camera and betting a sizable wad on its future. Now Land thinks the Highlander has made the difference by opening up new horizons in research and marketing. He believes he has much of his future research work already cut out for him in just perfecting designs for newer, lower-priced models of the original camera.

• **Coming of Age**—The new camera, as much as anything else, signals Polaroid's coming of age. Behind its sendoff is four years and \$1.4-million worth of design, engineering, tooling, and production. Before the war, Polaroid was shuffling along on its line of sunglasses



Assembly-line adhesives cut cost of honeycomb panels

Armstrong's assembly-line adhesives cut the cost of honeycomb panels two ways. They save valuable time because they bond on contact. And their high immediate strength eliminates labor and equipment required for pressing, clamping, and curing operations.

The actual bonding operation is simple. Cores and skins are coated with adhesive and dried with infrared heat in less than a minute. The skins are then placed on the core, and the assembly is passed through pinch rolls to make the bond. The bonded panels can be shipped immediately or fashioned on the spot into flush doors, tables, office partitions, or many other honeycomb products. The entire operation is fast, simple, and economical.

Practically any skin material can be fastened to honeycomb with Armstrong's Adhesives. The bond has enough flexibility to withstand normal expansion and contraction in the skins and core, and the adhesive's high shear strength insures stability where the bond is subject to vertical stress.

Before setting up your honeycomb operation, get the full story on Armstrong's assembly-line adhesives. Write for your free copy of Armstrong's new 36-page manual on adhesives, coatings, and sealers. Armstrong Cork Co., Industrial Division, 8006 Indian Rd., Lancaster, Pa. In Canada, 6911 Decarie Blvd., Montreal, Quebec.

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PAY CHECK

John T. Richardson
109-77-4423

PAY TO THE ORDER OF John T. Richardson
109-77-4423

CHECK NO. 1415 DATE MAY 30 64

\$*147 DOLLARS 22 CENTS

NET AMOUNT \$*147.22

THE PROGRESSIVE CORPORATION

(SPECIMEN)

FIRST NATIONAL BANK
NEW WAY, OHIO

STATEMENT OF EARNINGS AND DEDUCTIONS

John T. Richardson
109-77-4423

DATE	HOURS	REG. EARN.	O-T. EARN.	GR. PAY	WITH. TAX	F.I.C.A. TAX	OTHER TAX	MISC.	BONDS	WOSP.	RETIRE.	ADV.	MISC.
MAY 26 64	7.50	147.00	12.50	202.50	29.90	3.04	3.04	2.03	7.50	1.47	.69	1.64	.8

The small pay statement illustrated was produced on the NEW UNDERWOOD SUNDSTRAND PAYROLL

Hard to believe, isn't it . . . that this new ingenious machine can perform this *triple function* in one operation:

- Lists vertically on the pay statement
- Prints, horizontally, the identical entries (in columnar form on the employee's earning card and journal)
- Selects storing registers automatically

20 TOTALS

The New Underwood Sundstrand Payroll Machine provides twenty register units for accumulating totals and computing control balances:

- Automatically prints everything on the check
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Automatically safeguards the check
Automatically ejects and automatically stacks completed checks

Provides the most complete earnings records, including quarterly and yearly totals for each employee

Entries are made on the simplest keyboard of all time . . . the famous Underwood Sundstrand 10-Key Touch Method Keyboard that anyone in your office can operate.

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Sales and Service Everywhere

machine make this statement?

CR.	UN.	INS.	NET PAY
5	125	172	147.22

THE PROGRESSIVE CORPORATION
NEW WAY, OHIO

PAY CHECK

PAY TO THE ORDER OF John T. Richardson
109-77-4423

CHECK NO. 1415 DATE MAY 28 54

NET AMOUNT \$*147 DOLLARS 22 CENTS \$*147.22

FIRST NATIONAL BANK
NEW WAY, OHIO

THE PROGRESSIVE CORPORATION
(SPECIMEN)
OFFICIAL SIGNATURE

PLEASE PRINT NAME AND ADDRESS OF THE PERSON TO WHOM THIS CHECK IS TO BE PAID

Before you choose any payroll machine, find out how well this new Underwood Sundstrand can handle your requirements. Mail the coupon today!

MACHINE →



OW-5-12-5

Underwood Corporation
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Please send literature further describing your new Underwood Sundstrand Payroll Machine.

☐

I would like to have a demonstration. Please phone for appointment.

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Firm _____
Street _____
City _____ State _____



EYEING THE DO-IT-YOURSELF BOOM?



● Most of the home tools enjoying the new sales boom are made of castings from iron.

Peacetime conditions with new technologies and ample supplies, suggest that you re-examine your product and processes. The immediate future is attracting many newcomers with good ideas. Remember—there are five major grades of pig iron

for castings. You ought to consider each. But there is only one supplier of all five grades—Republic Steel.

Therefore Republic's pig iron metallurgists can advise you without hesitation or sales prejudice. And they keep themselves absolutely up to the minute on techniques. Let a Republic metallurgist help you do it better for the do-it-yourselfers.

Casting Manufacturers are Twice Our Customers

The finishes used on the cast iron do-it-yourself tools are, in many instances, made from coal chemicals. Of the 48 producers of coke oven chemicals, Republic is the third largest. Coke oven producers last

year furnished two-thirds of the nation's supply of coal chemicals, for which tar and benzol are the basic materials. The column on the facing page shows a few of the multitude of products made with coal chemicals.



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OF STANDARD STEELS
AND STEEL PRODUCTS



Thousands of steels and steel products as well as non-metallic products now bear the Republic name.

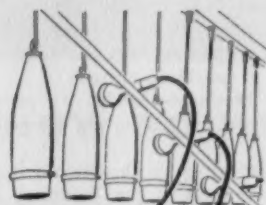
Do you know these coal chemicals?



Toluene—from which an amazing variety of dissimilar things are made: lacquers, dyes, perfumes, pharmaceuticals, coatings, aviation gasoline, inks, thinners and T.N.T.



Benzol—used in making synthetic rubber, nylon, phenols, aniline oil, rubber cement and detergents.



Xylene—used in aviation gasoline, germicides, riboflavin, paints, varnishes, perfumes and dyes.

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ore mines here and abroad; lake and ocean-going ships; coal mines; furnaces and huge steel mills, North and South; steel fabricating plants across the nation and in Canada; sales offices in principal cities; PLUS 70,000 men and women working together to produce steels and steel products to help build and protect a stronger America.

and visors—its exclusive optical coatings. Now it has sprinted to a position in the top five photographic firms in the industry, just behind Eastman Kodak Co., General Aniline & Film Corp., E. I. du Pont de Nemours & Co., Bell & Howell Co., and Argus Cameras, Inc. It owes this mostly to its triple line of cameras, the Speedliner, the Highlander, and the \$249.50 Pathfinder. And it's the camera business, including film and accessory sales, that makes Polaroid's future look so bright.

The growth started when Land packed a darkroom that would develop its own pictures in less than a minute into a camera slightly larger than conventional models. You just aimed the camera, snapped the picture, and then lifted out the finished print.

When Land introduced the camera at a meeting of the Optical Society of America in 1947, he admits that "it was reasonable to snicker at the idea." But the industry soon stopped snickering.

• **Sales Spur**—Right now, Polaroid officials expect the Highlander to be its largest seller, outstripping the original Speedliner, which has sold half a million in six years. One Polaroid executive adds happily: "The lower-priced camera should spur the sales of the others."

The camera business now constitutes 85% of Polaroid's gross sales, which have climbed steadily in the past six years from \$6.7-million to \$27-million.

Polaroid has an exclusive on the picture-in-a-minute invention, for which it stresses these advantages:

- **It's simple.** Anybody can get good pictures with it. A simple dial sets both the shutter and lens opening, so there is no need to understand complicated focal length stops.

- **It's quick.** You don't have to mess with darkroom apparatus or wait for the corner drugstore to develop your prints.

- **It's economical.** Conventional film plus the costs of developing add up to more than the flat cost of the Polaroid film.

- **High Turnover**—Polaroid says it sells a lot of film because of the modest cost per picture. The company says the user of a conventional camera might buy three to four rolls of film a year; Polaroid owners use about 18 rolls a year, often buy as many as six rolls at a time.

The company is ingenious in tying the camera owner directly to it. Land believes in pampering the ultimate customer and keeps a constant check on what sort of pictures the camera owners are taking. This interest has cost Polaroid about \$100,000 a year in customer services. By offering a free roll of film, Polaroid gets two out of three new owners to register their cameras. After the customer buys a

Polaroid, he receives a personal letter of welcome signed by a vice-president. Six weeks later, Polaroid mails a questionnaire to find out what criticisms the owner has, what he likes, whether he has had trouble taking pictures.

- **Customer Services**—Once registered, the customer automatically becomes a subscriber to the Minute Man, a 10-page booklet published eight times a year, which carries how-to-do-it articles. And if the customer sends in any questions, he gets an answer with a personal touch. Say a customer writes to Polaroid for advice on a picture problem. The company has a file of stock answers already taped. It picks out the right items and feeds them to an electromatic IBM typewriter, which types out a personalized reply. Picture reproduction also ties the customer to the company. The customer who wants extra prints or enlargements has no choice: Polaroid alone can handle the job.

Polaroid believes in pampering its dealers as well as its customers, going out of its way to offer training suggestions and sales tips. "A bad picture is the worst thing that can happen to us," Land says. "And a good picture is its own salesman. That's why we spare no trouble in helping out dealers."

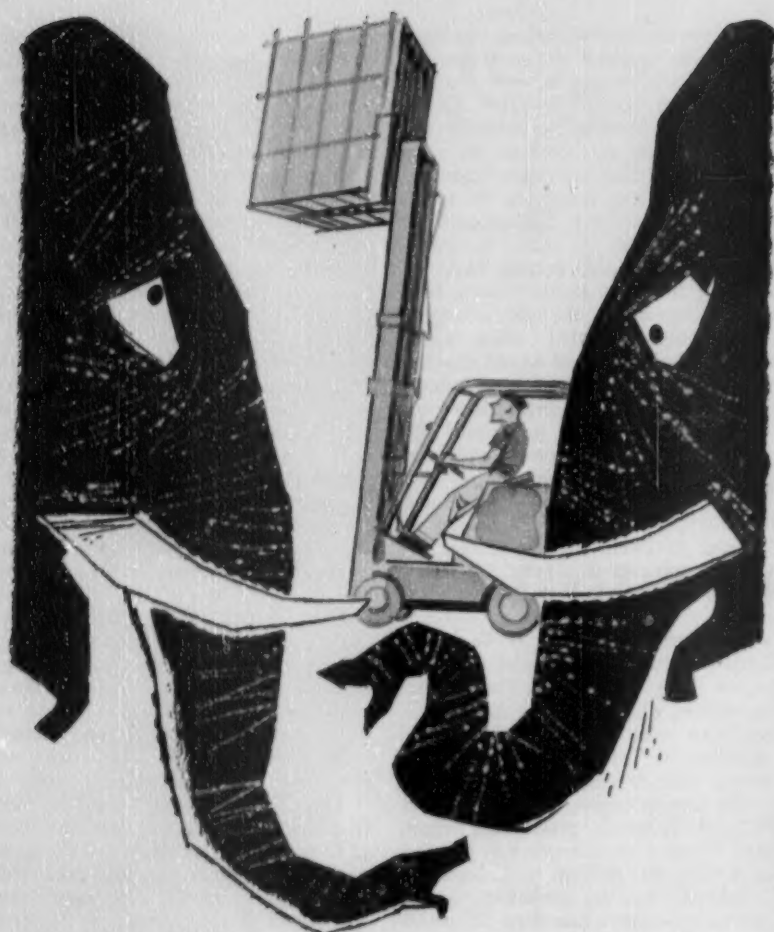
- **Test Case**—Polaroid considers the Highlander campaign a demonstration of its interest in the dealers. When the original Speedliner was first marketed, some dealers had felt they were being left out of things, because of the long wait for product demonstrations. The Highlander campaign changed all that by giving all the dealers a look in within two days.

- **Consumer Demand**—Polaroid figures the pent-up demand for a cheaper camera merits something more than a modest show where dealers inspect hand-made models. The company feels it ought to sink as much in pushing the product as the dealer does. In part, this means keeping a big inventory of cameras ready for immediate delivery. "Our Speedliner was pulled through the retail end," says Robert C. Casselman, Polaroid sales and advertising manager. "We followed the dealer." With the Highlander, Polaroid is gluing itself to the dealers' coattails.

As a research-based company, Polaroid feels less nimble in production matters. Actually the only complete item it turns out is the film used in Polaroid cameras, where it wants to protect its trade secrets.

The camera line is farmed out to other companies: Speedliner to U.S. Time Corp. of Waterbury, Conn., Highlander to Greist Mfg. Co. of New Haven. Polaroid assembles the high-priced Pathfinder itself, making some of the parts, subcontracting the rest.

- **Company Operation**—Polaroid keeps



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its own engineers at U.S. Time and Greist, and believes it could produce the cameras tomorrow if it had the plant capacity. Other company engineers work in subcontracting plants, mostly on quality control. And Polaroid tends to feel that the arrangement is practically its own operation. If and when Land feels he's ready to move into direct production himself, he could just pull his engineers out. But most industry observers feel that day is quite a way off: Things are working too well as they are.

One question that puzzles the industry: What kind of company is Polaroid trying to be? Despite its relative lack of size, it has some of the capacities and many of the inclinations to take on anything from research to direct full-scale production to marketing its own wares.

• **Growing Comfortably**—One Polaroid executive says the company wants to grow comfortably, but not excessively. If you ask anyone at Polaroid how many people are on its payroll, you don't get an exact answer: "You mean today or tomorrow?"

Polaroid's executive vice-president, J. H. Booth (picture, page 102) appears to many in the trade the real key to Polaroid's future. Booth moved to Polaroid from a vice-presidency at Bell & Howell in 1948; he had been offered a handsome stock option, but his friends advised him not to take the job. Looking back, he says he must have had faith in Polaroid's future from the start. For Booth and Land, the company's expansion is on a plan-as-you-go basis, which may explain why they're shifting operations from seven rented Cambridge buildings to a wholly owned property in nearby Waltham.

• **Other Products**—Besides its camera line, Polaroid is betting on two other products:

• **Vectograph**, with which it hopes to revive interest in the slumping 3-D films. Vectograph, developed in cooperation with Technicolor Inc., puts 3-D on one film, thereby saving the expense of two projectors for a single picture (BW—Jan. 30 '54, p72).

• **Polaroid headlights** for cars and trucks, which the company says would reduce night auto accidents. General acceptance of the headlight seems at least several years away.

Land and Booth feel that Polaroid represents a new twist in the business community. To Land, business and science are inseparable. "To be a scientist and manager," he says, "is one integrated activity. What the scientist can provide is an insight into the future. He doesn't have to ask experts or wait for a vote on some research idea."

• **Personal Touch**—Land ordinarily doesn't see much company mail, works



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Back-and-forth . . . back-and-forth . . . travel these horizontal spray units. They are transforming the natural tan color of acoustical tile into a soft, clean shade of white.

This finish is a special emulsion formula developed for the new fully automatic tile production line at the Newark, Ohio, plant of the Owens-Corning Fiberglas Corporation. Called Glidden Acoustical Tile Coating, it meets all standards of light reflectance, appearance, and fire retardment, yet does not reduce the sound-deadening properties of the tile.

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"Century" Pipe provides a modern, basically different kind of water main. It is made from two practically indestructible cost-saving materials, asbestos fiber and portland cement.

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4. DURABLE. 5. IMMUNE TO ELECTROLYSIS. 6. TIGHT JOINTS. 7. SMOOTH BORE. 8. EASILY, QUICKLY LAID. 9. LIGHT WEIGHT. 10. LOW COST.

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on too high a level to fret over things like ad schedules. But he remains in constant touch with company problems. "It's not a strain to know everything in a company this size," he admits. "But if I had to worry about everything, then it would be hard. That's why I have a responsible management under me." Though Land believes in an orderly distribution of responsibilities, he says there is no such thing as scientific management.

When Land gets a management idea he puts it into effect right away. For instance, Land believes that when executives have an idea they express it best at the moment of inspiration. So Land hooked up a recording device in an outer office. When he is away, executives can tape their ideas for him without waiting.

Bosom Friend

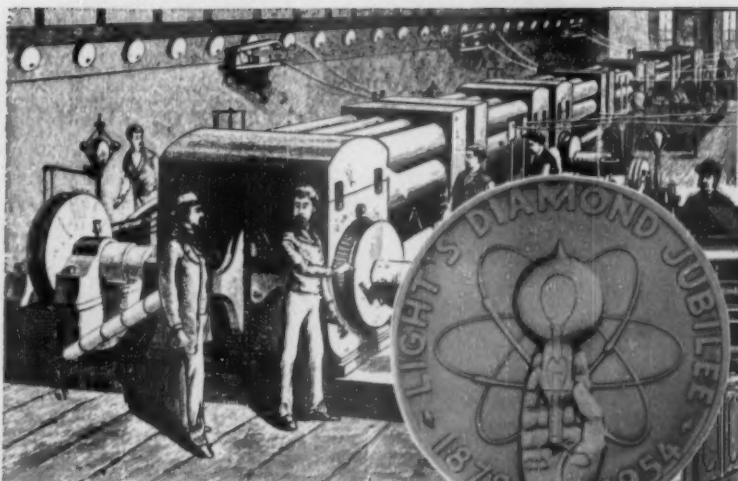
Poses, the stick-on bra, is back on the market. But this time the patent owner is looking for a buyer.

Five years ago, there was a muffled drum beat in the jungle of feminine fashions. The ladies, ever eager to put up a good front, heard it. Over bridge games, at cocktail parties, in powder rooms, at beaches, the word spread. As a result, the new product never did hit the retail market. Eager mail order customers practically tore it off the manufacturer's sewing machine.

The product was Poses (pronounced posies), a stick-on brassiere designed by Charles L. Langs (BW-Jul.16'49,p25). The bra consisted of two nonconnected cups, free of over-the-shoulder straps. Langs had got the idea from watching his wife try to rejigger her bathing suit straps to get an even sunburn.

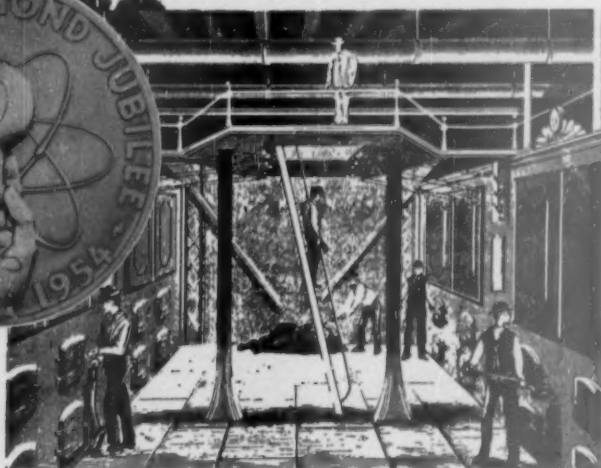
• **Sell Out**—Langs introduced the bra through full-page ads in Life and Look. The stores tried to buy, but the girls beat them to it. In no time flat, Langs was kept busy just opening orders. Soon his production line couldn't keep up with the demand. He decided to sell his patents. This year, his invention landed back on his hands—and it seems to be sticking to his fingers as stubbornly as it was supposed to stick to a bosom.

• **Let Down**—According to Langs, he sold the patents, trademark, and manufacturing rights to Textron, Inc., in 1949, for a cash down payment and a minimum annual royalty of \$25,000. Textron paid the minimum royalty up until last year. When it failed to do so last year, Langs elected to repossess his patents. Textron also had ownership of Langs' Edison Distributing Co.



Dynamo Room

Pearl Street Station, New York,
built in 1882
(pictures courtesy Thomas Alva
Edison Foundation)



Boiler Room

Birthplace of

AMERICA'S INDUSTRIAL MIGHT

Though the machine age had existed for more than a century, Edison made it come of age. From his invention of the practical incandescent lamp in 1879 he went on to erect one of the most important industrial structures ever built—the Pearl Street central power station. This station was the forerunner of an industry which, as a source of light and power, changed the whole course of world development.

Electricity really began to make itself felt in America about 1900. By then, the average manufacturing worker had gained the electrical equivalent of two tireless helpers. *Today, the equivalent of 240 men help him on his job.* In this one dramatic fact is the underlying reason for our vast production capacity and high living standards.

Progress—both in efficiency and capacity—since the days of Pearl Street borders on the fantastic. For example, a turbine-generator is now being built which will have more than 2,000 times the capacity of one of the Pearl Street dynamos. And the C-E Boiler which will supply steam to this giant will be as high as a 15-story building—with a total volume greater than that of the entire Pearl Street Station and Edison's Menlo Park Laboratory combined.

This C-E Boiler, furthermore, will use less than $\frac{1}{4}$ of a pound of fuel to produce a kilowatt-hour of electricity, compared with 10 pounds at Pearl Street. To illustrate the significance of this achievement, suppose all the power in this country today were generated at Pearl Street's efficiency. Then, utilities would have consumed 2.4 billion tons, instead of the 178 million tons actually used in 1953. At present day fuel prices, this would have meant additional fuel costs of 17.7 billion dollars.

In this year of celebration of Light's Diamond Jubilee, Combustion Engineering—long associated with progress in power generation—is proud to pay tribute to the great and growing electric utility industry on the 75th anniversary of the invention that made it all possible.

B-749

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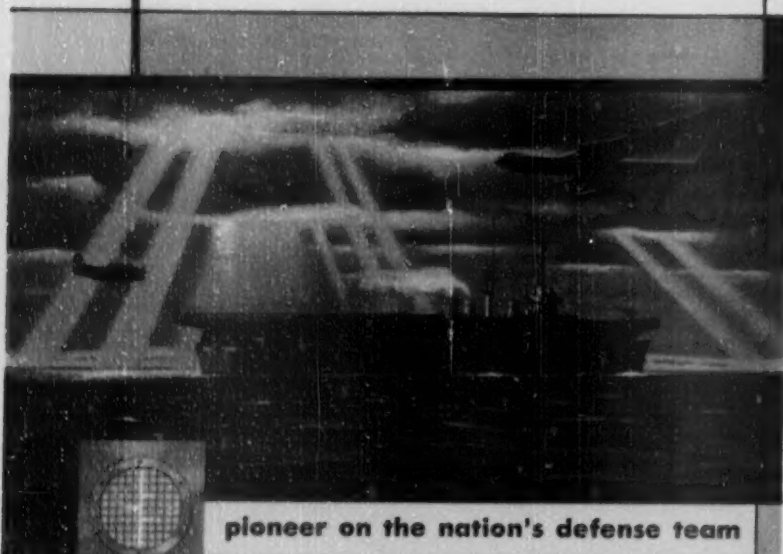
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TI is especially well-qualified to contribute to the Free World's defense projects. For over 23 years, through its associate GSI (Geophysical Service Inc. and its six related companies), TI has pioneered the use of the reflection seismograph method for oil exploration on a worldwide scale. This experience gained in rugged, remote areas... plus the years of experience in research, development, and manufacture of precision seismic equipment... contributes valuable technical knowledge to the Nation's defense effort.

TI is a pioneer in electronics, instrumentation, electro-mechanics, and as a distributor of these products and supplies. Of all TI personnel, over 25% are graduates in engineering or allied fields... with professional training ranging through Ph.D. levels. With people of this caliber, TI research and development laboratories constantly achieve greater perfection.



Keep an eye on TI!

TEXAS INSTRUMENTS
INCORPORATED

5000 LEMMON AVENUE DALLAS 9, TEXAS

(BW-Oct. 8 '49, p75), which originally produced and distributed Poses. Textron turned this company back to Langs, who has since dissolved it as a corporate entity.

Textron had started manufacturing Poses, but had never marketed them. In the postwar shuffle that beset the textile industry it decided to change its merchandising policy and make only gray goods—no finished products. So the company dropped Poses, along with some of its underwear lines.

Langs originally sold Textron three patents on Poses. While Textron held the patents, it also picked up several others on similar items using double adhesives—and now Langs not only has his original three patents on his hands, but a couple of others.

• **Support**—Now Langs is trying to sell his patents to someone who has the manufacturing facilities and merchandising knowhow. He still feels that with the right background, Poses could go places.

For one thing, Poses will stand pretty rough treatment—they'll stick through active sports and, with special care, through water bathing. For another, they're a great boon to women who like decollete but who have an ingrained mistrust of the regular strapless brassiere.

COMPANIES BRIEFS

Calendar and novelty maker Brown & Bigelow of St. Paul, Minn., made its fourth purchase of a company in less than a year. It bought Herb-Shelley, Inc., of Farmington, Minn., which does a \$1-million a year business in polyethylene bags and envelopes.

• **General Shoe Corp.** of Nashville nearly doubled its capacity for making its Valentines line of women's dress shoes. It signed a 25-yr. lease for a 44,000-sq. ft. plant vacated by a Nashville clothing manufacturer.

• **An equipment leasing plan** worked out so well for Clark Equipment Co. in a six-month trial that the company has set up a subsidiary, Clark Leasing Corp. In the trial period, Clark put nearly \$2.5-million worth of industrial trucks, mostly fork-lifts, out on lease.

• **Eastern Gas & Fuel Associates** of Boston acquired oil distribution facilities in the Delaware Valley by buying assets of Joseph M. Patterson & Co., Inc., of Philadelphia. Property includes an ocean terminal with capacity to unload two tankers and seven barges at a time and to store more than 130-million gal. of bulk liquids; a fleet of



World's First 84" Magnesium Coil Mill.

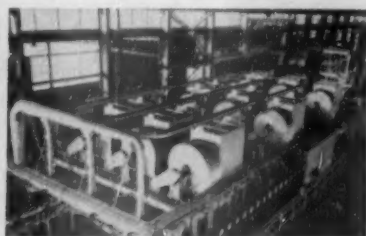
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PRICE REDUCTION
ON SHEET AND PLATE**

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Here for the first time, large magnesium rolling ingots weighing nearly a ton are being rolled.



Specially designed, carefully controlled ovens pre-heat huge magnesium ingots just before rolling.



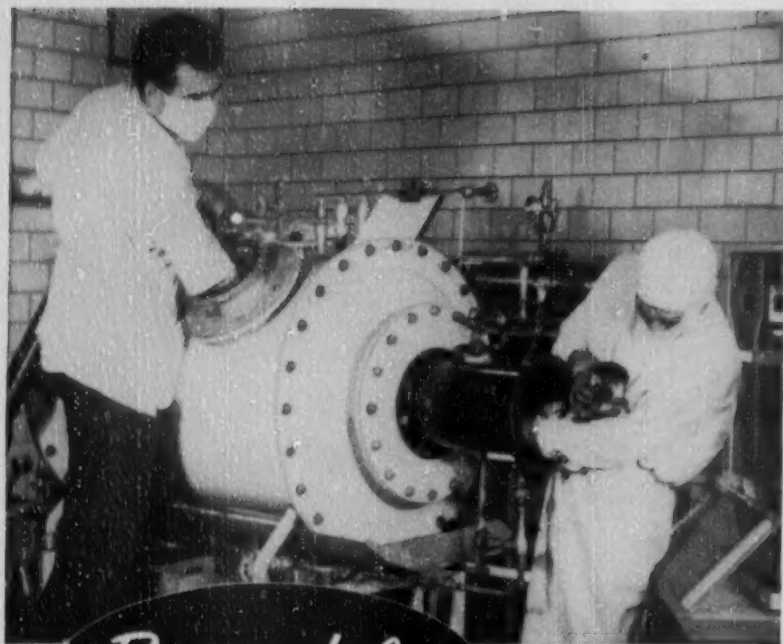
Constant inspection plus rigid production controls assure uniform magnesium sheet quality.



Note how coil of magnesium sheet illustrates new availability in greater widths and lengths.

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BRILLIANT ACHIEVEMENTS in the field of germ-free life have focused the eyes of the world of science on famed University of Notre Dame and its LOBUND Institute. Here is pioneering in research that recalls those earlier experiments on the very same campus which opened the way to synthetic rubber!

Science today blazes the path to Industry's major advances. In the scientific and engineering laboratories at Notre Dame are the facilities and the skills for research in all major fields. These are available under arrangements to meet the requirements of specific industries.

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SOUTH BEND and MISHAWAKA, INDIANA

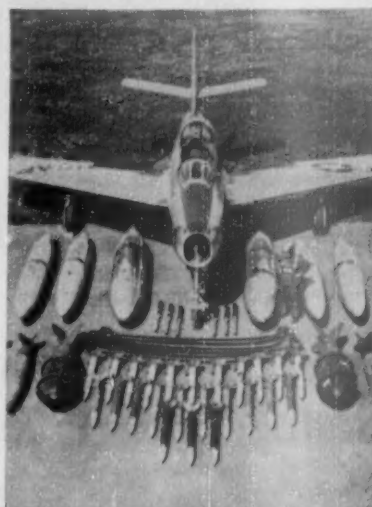
COMMITTEE OF 100

tugs and barges; a barge terminal; and a fleet of tank trucks.

Brown Trailers, Inc., is completing consolidation of its offices in Toledo, after being quartered in Spokane for the past eight years. The company still has a plant in Spokane and is building one in Reading, Pa., besides the Toledo plant it bought several months ago. Brown makes aluminum trailers and shipping containers.

A new automatic pinsetter for bowling alleys will be manufactured and marketed under a close tie-up between the Murray Corp. of America and the Brunswick-Balke-Collender Co. For Murray, it's part of a diversification program; for Brunswick, it's an extension of the market for bowling and billiards equipment, in which the company claims 85% of sales. The pinsetter will be sold to bowling alley operators as replacements for pinboys.

Cancellation of Air Force subcontracts for landing gear has shut down the Toledo plant of A. O. Smith Corp. The 1,300 employees were laid off gradually, starting in January when the orders were canceled. The plant will be kept in a standby status.



Grim Cargo

Any combination of armament carried by the Republic F-84F Thunderstreak (above) makes the U.S. Air Force's first swept-wing fighter something to be reckoned with. Each bomber mounts six 50-caliber machine guns and ammunition belts (center), and packs different types of stingers. It can carry a varying combination load exceeding 4,000 lb. The pilot at right suggests the sizes of the 450-gal. and 230-gal. fuel tanks.

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*... speeds filing ...
eliminates carbon copies*

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- ☐ If you are now posting to ledger and customer statement
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"Recordak" is a trade-mark



originator of modern microfilming — and its application to business systems

It's better business to buy Chevrolet Trucks



New chassis ruggedness really pays off in lower upkeep . . . longer truck life!

Over the years, Chevrolet trucks have built a great reputation for stamina and long life . . . for their ability to stand up on tough jobs day in and day out with a minimum of maintenance.

How do the new '54 Chevrolet trucks measure up to previous models for ruggedness and reliability? The answer is *they're even better!* These great new Advance-Design trucks have what it takes to take your job in stride!

Take frames, for example. Every '54 Chevrolet truck has a stronger, more rigid frame. In addition, there are newly designed clutches in all models, stronger rear axles and drive lines in two-ton models, higher-capacity universal joints in medium- and heavy-duty models.

All this extra built-in ruggedness means that you'll enjoy extra-low upkeep costs with a new Chevrolet truck. And it also means that you can look forward to extra miles of dependable, money-saving truck life.

You can look forward to lots of other big advantages, too—advantages like new cab comfort, greater engine power and increased operating economy. They're all yours in America's lowest-priced line of trucks!

Drop by your Chevrolet dealer's and take a look at the huskiest, thriftiest Chevrolet trucks ever built. He'll be happy to give you all the facts about the model that's just right for your job. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET ADVANCE-DESIGN TRUCKS



NEW, BIGGER LOAD SPACE: New pickup bodies have deeper sides. New stake bodies are wider, longer and roomier. You can haul bigger, bulkier loads . . . save time and extra trips. Also, these bodies are built to stand up on tough jobs—and keep coming back for more!

Completely new '54 Chevrolet trucks offer all these brand-new features—

NEW ENGINE POWER AND FUEL ECONOMY: Bigger, brawnier "Thriftmaster 235" engine. Rugged, durable "Loadmaster 235" engine. All-new "Jobmaster 261" engine.* All three deliver new power *plus* new operating economy!

NEW AUTOMATIC TRANSMISSIONS: Here's great new driving ease! Truck Hydra-Matic transmission is offered on 1/2-, 3/4- and 1-ton Chevrolet trucks.

NEW COMFORTMASTER CAB: Offers new comfort and safety. New one-piece curved windshield gives

extra visibility. New instrument panel is easier to read and controls are easier to reach.

NEW RIDE CONTROL SEAT:* Seat cushion and back move as a unit to "float" you over bumps. Eliminates annoying back-rubbing.

NEW ADVANCE-DESIGN STYLING: New, massive front-end design. New parking lights show the full width of the truck.

*Optional at extra cost. Ride Control Seat is available in standard cabs only, "Jobmaster 261" engine on 2-ton models.

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!

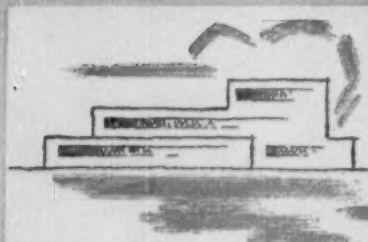


INDUSTRIES

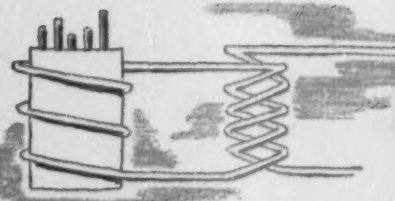
Atomic Industry: Born a Giant

Who Will Build the Atomic

Important Parts of an Atomic Plant



Fuel Handling



Reactor and Heat Exchanger

How They Work



Fuel is stored here to replace spent materials in reactor. There may also be a processing operation, to separate partially spent fissionable material from useless "ash" and to prepare it for further use in reactor.

This is where the chain reaction takes place. It creates heat, which in pressurized water reactor is carried out of reactor by a primary heat exchange system; this heats steam in a secondary heat-exchanger, which sends it to turbo-generator.

Equipment They Need



If it's just a storage building, it will need little special equipment beyond heavy shielding, devices for handling radioactive materials by remote control, perhaps an overhead crane to move fuel to reactor. If fuel from reactor is reprocessed, it will require considerable chemical and metallurgical equipment to recover uranium or plutonium from other fission material, fabricate it for re-use.

The reactor itself is a precision-built device in which uranium or plutonium is fissioned; through it travel tubes of the primary heat-exchange system. It's a highly radioactive area; and all materials in reactor and heat exchanger must be specially designed to withstand radiation damage, corrosion, and great heat, and to absorb as few as possible of the neutrons that are vital to the fission reaction.

Who Are Suppliers

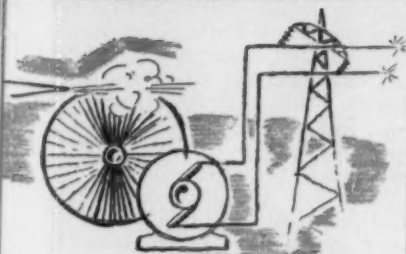


The shielding will likely be ordinary concrete. The fuel reprocessing job might be taken on by the prime contractor for reactor; or the facility might be built by a chemical firm. Recovery of fuel and its preparation for reactors are chemical and metallurgical jobs that could be farmed out to competent firms in the field.

For the pioneer Duquesne plant, Westinghouse will build the reactor; it will get architect-engineering service from Stone & Webster Engineering Corp.; has subcontracted the heat exchangers. A number of firms are ready to design reactors, including Walter Kidde Nuclear Laboratories, Bendix Aviation, and others.

and Getting Bigger

Plants?



Turbo-Generator

Here is where the steam hits the blades of the turbine that powers the electric generator. From the turbine on, the equipment and its operations are the same as in conventional electric generating plants.

This will be identical with equipment in conventional plants. The first civilian atomic power plant, to be built for Duquesne Light Co., will have low-temperature turbines like the topping turbines that use secondary steam in conventional plants. That's because of the comparatively low temperature of the heat created in the reactor—something over 500F.

Firms that provide turbines for the utility industry will also supply atomic plants; Westinghouse, Allis-Chalmers, and General Electric are now the principal suppliers. Duquesne Light will pick the manufacturer of its turbo-generator, will also go to conventional suppliers for switchgear, transformers, transmission equipment.

**BUSINESS WEEK

Even a quick glance at the various kinds of equipment needed for atomic power and the numerous industries called in as suppliers (tabulation at left) gives you some idea how big is the place the atomic energy industry has already staked out for itself in U.S. business.

That's one thing that makes the atomic energy industry different: From the very start, it has been a big business. Most of the giant industries in the U.S.—take steel or automobiles, for example—started out in a relatively small way and grew in size and scope with the years.

But the precocious postwar atomic industry already has some \$8-billion of plant built or under construction. The government's atomic weapons project has always been a multimillion-dollar spender; last year the Atomic Energy Commission spent more than \$800-million for materials, supplies, and equipment.

In making its atomic weapons, the government calls on hundreds of companies to supply its needs; and the tabulation at the left shows that atomic power development has a similarly wide reach. In the number and variety of its suppliers, the atomic energy industry rivals steel or autos; many industries and many businessmen even now have a stake in its future.

• **Bigger Yet**—That future is already on the way. The tremendous development to date has come before the atomic energy industry even got on a commercial basis. By law, only the government can now own or use fissionable materials and the facilities to produce them. It's a vast monopoly—but a unique one, since the bulk of the work is carried on by private industry and by universities under contract with the AEC. (Actually, out of some 150,000 employees in atomic industry, only about 7,000 are on government payrolls.)

Now Congress appears ready to change the law to permit private industry to put atomic energy to work in its plants and shops. This is certain to make the atom even bigger business. There's a chance that the private atom alone will become bigger than steel, autos, or any other single industry.

Last week's unanimous endorsement of the law change by AEC virtually assures its passage as soon as the congressional mill can find space in its hoppers. The AEC's report to Congress looks to the change to bring eventually "full participation of the nation's electric energy producers and equipment



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"We feel that a great deal of the success of our promotional selling is due to telegrams," says Alex M. Lewyt, President, Lewyt Corporation of Brooklyn, N. Y. "Fast communication with our distributors provided by Telegrams has been invaluable in the seven years we've been making and marketing Lewyt Vacuum Cleaners."

"Better service to our 275,000 policyholders by Telegram"

"With more than a quarter-million policyholders, we process a lot of claims," says Leo Goodwin, President, Government Employees Insurance Co. of Washington, D. C. "We've found one of the best ways to handle claims and adjustments quickly, accurately, and on record—as they must be handled—is by Telegram. That's why we've almost doubled our use of Telegrams in the last three years."



LEO GOODWIN



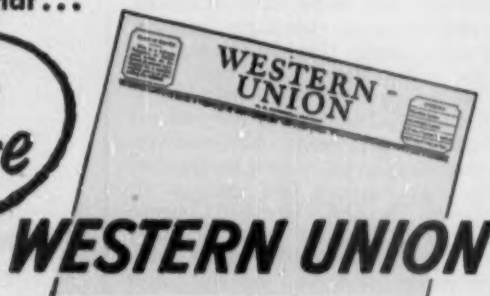
A. M. PATE, JR.

"We stimulate our sales force with Telegrams"

"Every time we send telegrams to all of our salesmen," says A. M. Pate, Jr., Executive Vice-President of Panther Oil & Grease Mfg. Co., of Fort Worth, Texas, "we can count on a sales increase of at least 10% the following week. We use telegrams to announce price changes, new products, sales contests—and for collections as well. In our experience, telegrams far surpass any other written or spoken word for getting action."

You, too, will find that . . .

when it means business
it's wise to wire



manufacturers in the development and production of nuclear power."

I. Atomic Kilowatts

One expert—AEC's Dr. Robert P. Petersen—foresees the investment by 1985 of some \$11-billion of private capital just in the production of electric power from nuclear fuels. By that date, he figures, utilities will be putting \$1-billion a year into atomic power plants.

You can get much less optimistic views, of course, but utility executives generally believe that somewhere between 10% and 20% of the nation's power supply will be coming from atomic plants within two decades.

There may be other, even more important, commercial applications of atomic energy than electric power. If so, they are much further away. With a full-scale atomic power plant now being developed by Westinghouse Electric Corp. for Duquesne Light Co. (BW—Jun. 5 '54, p100)—and several experimental projects soon to be started—power from the atom has definitely moved from the laboratory to the engineers' drawing boards.

• **Room**—The scope of atomic power development is big enough for a lot of new industries to get into the act.

Certainly the chemical and metallurgical industries will get in. Companies new to the power equipment field—such as aircraft manufacturers and petroleum processors—may make a strong bid to build reactors.

Undoubtedly some of the many firms now champing at the bit are headed toward disappointment—if nothing worse. The atomic expert for one big firm deeply involved in power development had this observation: "Atomic power is now about where the automobile industry stood in 1904. In the last 50 years an awful lot of car builders went down the drain."

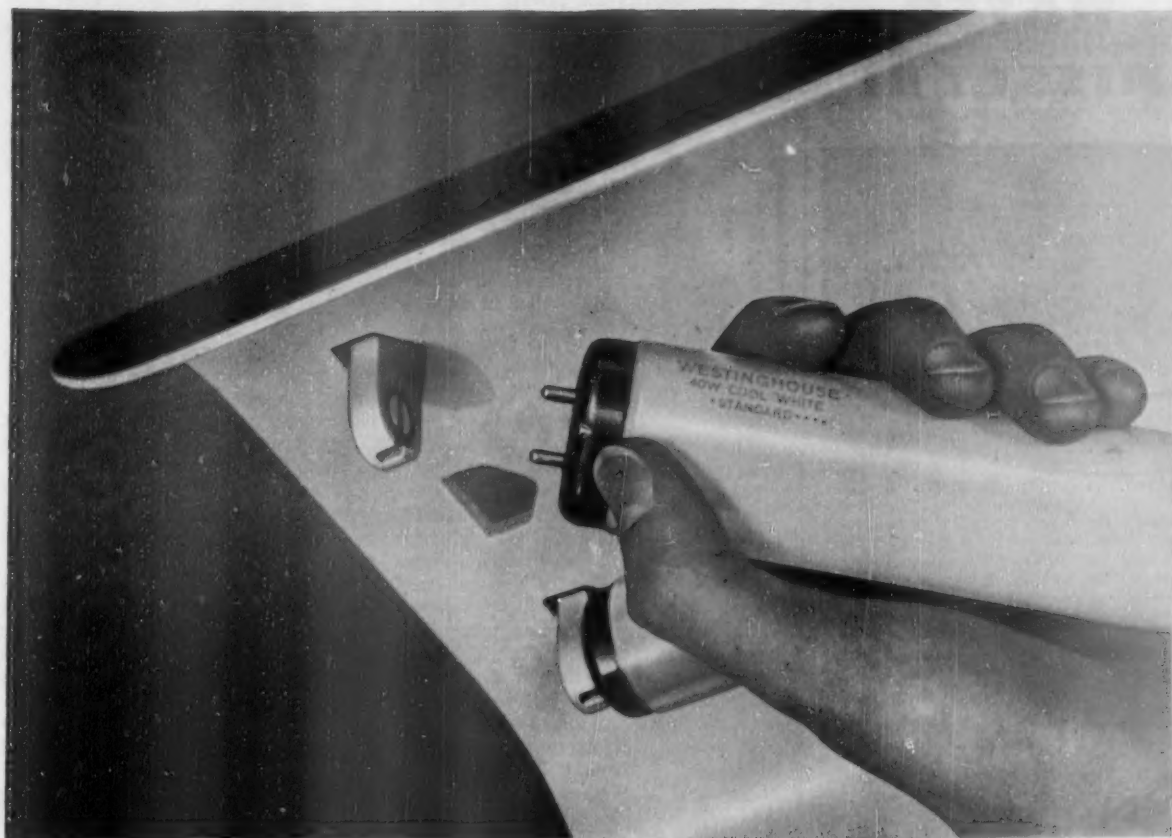
• **Demand**—He admits this sort of sober thinking is not deterring the enthusiasts. But then, neither automobiles nor any other infant industry ever had the clearly discernible volume demand that looms for atomic power.

Electric power demand in the U.S. traditionally doubles every decade. This puts a premium on development of new fuels—particularly one that promises to minimize transportation and storage problems as does atomic fuel.

However, it's not likely that transportation equipment—except for naval vessels and perhaps military aircraft—will find much use for atomic engines. Here the advantages of atomic over other fuels are not nearly so exciting.

II. Private Fields

There are many other fields in which atomic development has already opened



WESTINGHOUSE "Indicator Base" Lamps Lower Maintenance Costs... do yours?

Built into the base of every Westinghouse Fluorescent Lamp is a precision-engineered extrusion. This extrusion, or bump, acts as an "indicator", enabling you to seat lamps quickly and easily... even in the most difficult-to-reach places. An effortless touch or glance tells you if the lamp is safely installed. As a result, you save time and money when replacing lamps.

Because the "indicator base" insures proper seating, lamp drop-out due to faulty installation is virtually impossible. The Westinghouse plastic base is your insur-

ance against lamp drop-out. And unlike a metal base, it won't dent, forcing the pins out of alignment. This eliminates any chance of a lamp falling due to a bent base.

To protect your employees, reduce relamping costs, and make sure your standard fluorescent lamps have an average rated life of over 7500 hours, insist on Westinghouse. For further information, without cost or obligation, see your Westinghouse Lamp Supplier, or write to Westinghouse Lamp Division, Bloomfield, New Jersey.



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big opportunities for private industry, even while the government maintains its present proprietary interest. So many firms are involved in the present and prospective branches of atomic industry that a complete listing would approach the proportions of a telephone directory. There is even a trade association, the Atomic Industrial Forum, Inc., which has signed up more than 100 member firms in a little over a year.

• **Mining**—At no stage is private enterprise given more leeway than in domestic mining operations. You can prospect for uranium wherever you choose; the government simply insists on buying from you all the ore above a certain grade that you come up with.

That's why everyone from converted gold prospectors (page 130) to the big mining outfits such as Anaconda Copper and Vanadium Corp. of America are looking for uranium.

• **Processing**—In the last few years many companies have built or enlarged ore processing plants near their western mines. Considerable further processing of this ore is necessary before it is suitable feed material—that is, ready for use in a reactor that will convert the uranium to plutonium, or for the gaseous diffusion plants that separate fissionable U-235 from U-238. Processing of ore and feed materials is done for AEC largely by mining firms, chemicals producers, and oil companies.

Only one big plutonium production plant is in full operation. That's the Hanford (Wash.) plant, operated by General Electric Co. Du Pont is completing another, the Savannah River plant in South Carolina. The gaseous diffusion plants at Oak Ridge, Tenn., and Paducah, Ky., are operated by Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp. A similar plant is under construction at Portsmouth, Ohio.

You get an idea of the vast operations of these big production centers when you look closely at Oak Ridge and Paducah. To maintain these facilities the contract operator annually issues 35,000 orders to 9,000 different companies for materials, equipment, and services.

• **Research**—Though the main purpose of AEC's existence always has been to produce materials for atomic weapons, it has promoted research in several other fields at its big national laboratories. Out of the research came, among other things, the theory behind the naval reactors being built by GE and Westinghouse to power submarines. GE, Carbide & Carbon, and United Aircraft Corp. are designing reactors for military aircraft.

• **Smaller Lines**—Two comparatively small industries have developed from less restricted portions of the atomic

energy program. About 20 firms now are processing radio-isotopes, used as tracers in industry and medicine. Their sales came to \$600,000 in 1953.

A related industry, the manufacture of radiation detection instruments, grossed about \$20-million last year. Big customer of the 80 companies in this field was AEC itself.

III. New Product

Most important piece of new equipment in an atomic power plant is the reactor.

As a heat source, the reactor also is a likely component of ship and aircraft propulsion units. As a source of intense radioactivity, it is getting more and more attention as a research tool and as a source of radio-isotopes.

• **Pioneer**—Literally dozens of different types of reactors have been proposed as promising heat sources for atomic power plants (BW—May 29 '54, p. 29).

Each type of reactor has advantages—and disadvantages. None has been tested yet on the scale that would prove its economics or reliability of operation as a furnace for a commercial power plant.

That's why the plant being built by Westinghouse and Duquesne Light near Pittsburgh is so important (BW—Jun. 5 '54, p. 100). In addition to giving experience in dealing on a commercial basis with radiation and other characteristics common to all types of reactors, it will fill in some of the many blanks in data on a specific type—one that uses uranium with a higher than natural content of the isotope (U-235) that uses pressurized water as a coolant, and that will convert some of its uranium into plutonium.

• **Related Units**—"Of course, Westinghouse is interested in building other types of reactors," says Charles H. Weaver, head of the firm's Atomic Power Div. "Use of liquid metal as a coolant, for example, will permit the use of much higher temperatures and pressures. This obviously is to be desired at the turbine end. But the problem with fissionable materials is not the same as with conventional fuels, where higher temperatures and pressures give you more economy of fuel and fuel handling."

As a major supplier of heavy electric utility equipment, Westinghouse obviously proposes to build reactors for its power company customers. How much related equipment it hopes to supply the company is not ready to discuss.

• **Subcontracting**—At any rate, Westinghouse is calling in a flock of subcontractors on the Duquesne reactor. Stone & Webster Engineering Corp. will help design the reactor proper. Crane Co. will supply coolant valves. Two veteran manufacturers of steam



"You see POWELL VALVES everywhere!"

Not surprising when you realize that Powell makes more kinds of valves and has probably solved more valve problems than any other organization in the world. And this has been going on since 1846.

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It takes a great deal of courage to drill a hole in the ground in the hope that oil will be found. That is why those with timid hearts should never be in the oil business.

Most oil companies are quick to adapt better methods of exploration, drilling, producing, transporting, and refining. Because of this progressive spirit, the gasoline you use in your automobile is getting better and better. The cost per gallon stays pretty much the same from year to year, despite industry cost increases and high taxes.

SUNRAY's income from oil and gas production is derived from 7,098 gross active wells on 1,207 leases in 369 fields throughout the mid-continent area, California and Canada.

During 1953 SUNRAY drilled or participated in the drilling of 376 gross wells, the Company's interest in all wells drilled being equivalent to 275 net wells. As compared to the U. S. oil industry national average, the Company's percentage of successful producing wells was higher and the percentage of dry holes was lower in relation to the total wells drilled.

The Company recognizes the continuing necessity of searching for and finding oil and gas for the future and is maintaining its active program of buying leases and keeping geophysical crews active in areas with good prospects for finding oil in the U.S. and Canada.

Every year SUNRAY seeks to strengthen its position in the oil industry by constant improvement and logical expansion. There are no pessimists at SUNRAY.



SUNRAY OIL CORPORATION

GENERAL OFFICES . . . TULSA, OKLAHOMA

"America's Interests and SUNRAY's Interests Go Hand in Hand."

equipment, Foster Wheeler Corp. and Babcock & Wilcox Co., will supply the heat-exchange system.

Another firm that already has its heat exchangers in atomic installations is the Trane Co., which is doing special research on heat-exchange problems as related to atomic power.

In the reprocessing of the spent uranium charge (tabulation, pages 118-119) a number of firms are interested; to name a few, Carbide & Carbon, Dow Chemical Co., Vitro Corp. of America, Blaw-Knox Co., and Sylvania Electric Products, Inc.

• **GE**—General Electric, also a veteran of the atomic program, is another big utility supplier that is saying little about its plans other than for supplying reactors to traditional customers.

Francis K. McCune, who took over last year as manager of GE's Atomic Products Div., says his company's policy is to stay out of fields that are adequately served by existing suppliers. "But," he adds, "We feel free to step in wherever we feel we can make a genuine contribution."

• **Newcomer**—The third avowed entrant in the big power reactor field is a newcomer to the electrical industry, North American Aviation, Inc. North American got interested in atomic development after World War II. It participated in early work on the aircraft propulsion unit, decided commercial power reactors offered a good field for diversification when military orders for aircraft slacked off.

North American has built two small research reactors, is actively seeking customers for more. It is now negotiating a contract with AEC to build an experimental reactor employing liquid sodium as a coolant. The company is putting up a quarter of the estimated \$10-million cost of this project.

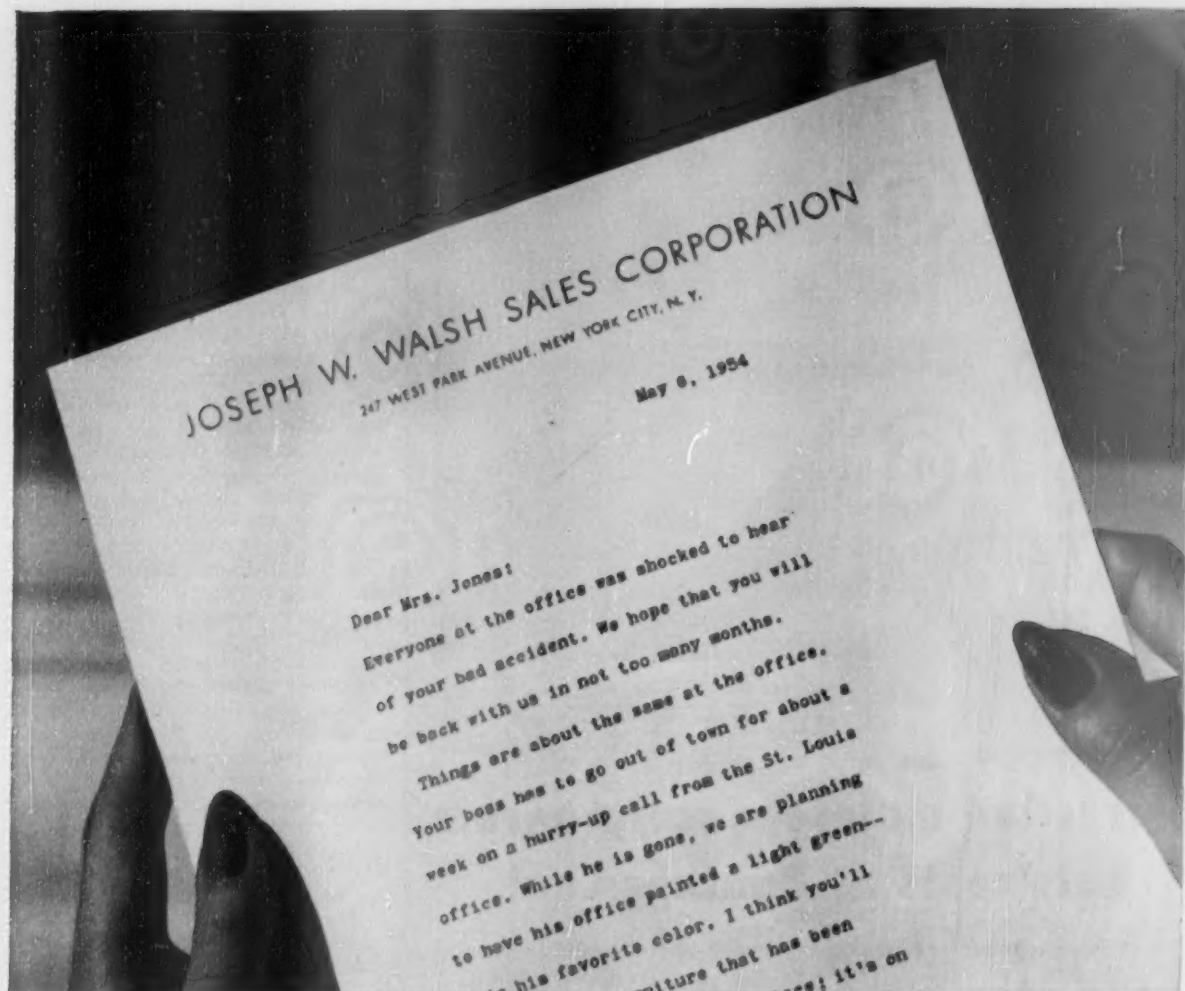
• **Not Interested**—Of the five companies with long experience in building and/or operating large-scale reactors—du Pont, Carbide & Carbon, GE, Westinghouse, and Phillips Petroleum Co.—only du Pont professes no interest in commercial atomic energy.

IV. Big Ones and Little

The interest of other big corporations, however, perturbs some smaller makers of conventional power equipment. Manufacturers of boilers and other steam equipment are particularly incensed—and bewildered.

Such companies, plus many others in unrelated lines, are determined to make a strong bid for smaller installations. Most are interested in the so-called "package" power reactor that AEC soon will order for the Army Engineers.

• **Forerunner**—Specs for the Army unit will be rigid. It will be a low-cost (\$2-million to \$3-million) and low



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These far-reaching Equitable Plans protect your employees against ruinous medical expenses. These expenses include: bills for doctors, surgeons, medicines, hospitals, professional nursing care and other items that can quickly wipe out an employee's life savings.

The cost of this insurance is amazingly low compared to the protection it gives you and your employees.

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Model 14.5 Twin Disc Fluid Coupling, shown mounted on 659-ft. conveyor drive at Panther Coal, handling 10 tons per minute. Available in Models 7.45 through 21". Fluid Couplings improve performance on motor- or engine-powered installation from ¾ to 600 hp. Ask for Bulletin 144-C.

Corrective maintenance program cuts costs at Panther Coal

At its Roseann Mine near Roseann, Va., Panther Coal Co., Inc. was able to prevent potential maintenance—and reduce belt costs—on a 659-ft. conveyor, by installing a special driving unit . . . incorporating a Twin Disc Model 14.5 Fluid Coupling with a 100 hp, 1770 rpm, 220-volt motor and a 15:1 Cone-Drive reducer with special roller chain and sprocket arrangement, designed by Mr. Joe Wantling, Maintenance Superintendent, and built in the owner's shops. Eliminating the drag and jerk of mechanical drive, the Fluid Coupling

provides smooth starts, preventing motor burn-outs and reducing peak tension . . . and permitting use of a 5-ply 36-oz. rubber belt.

Thousands of dollars are being saved daily in all types of industry, through corrective maintenance with Twin Disc Fluid Couplings. Why not contact your Authorized Twin Disc Hydraulic Dealer and ask his help on your drive problems? Or write Twin Disc, Dept. DS, Racine, Wis.



TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

Branches or Sales Engineering Offices: Cleveland • Dallas • Detroit • Los Angeles • Newark • New Orleans • Seattle • Tulsa

power (about 1,500 kw.) affair. That will be enough to supply a small military base. Size, too, will be limited. It must be small enough so that all components can be transported by air.

Even anticipating repeat orders from the Army, this kind of work of itself doesn't excite many businessmen. But they see the "package" unit as the forerunner of the type of plant that may prove the most popular—and profitable—within the next few years. That would involve a somewhat larger reactor—say of 5,000 kw. to 15,000 kw. capacity—that could prove economic in areas remote from conventional fuels.

At least seven companies are dickering seriously with AEC for the contract for the first "package" reactor.

• **Research Field**—Even more firms have expressed desires to build research reactors. These include such outfits as American Machine & Foundry Co., Babcock & Wilcox, Bendix Aviation Corp., Blaw-Knox, North American Aviation.

This is a promising field since AEC has given the green light to college ownership of low-power reactors.

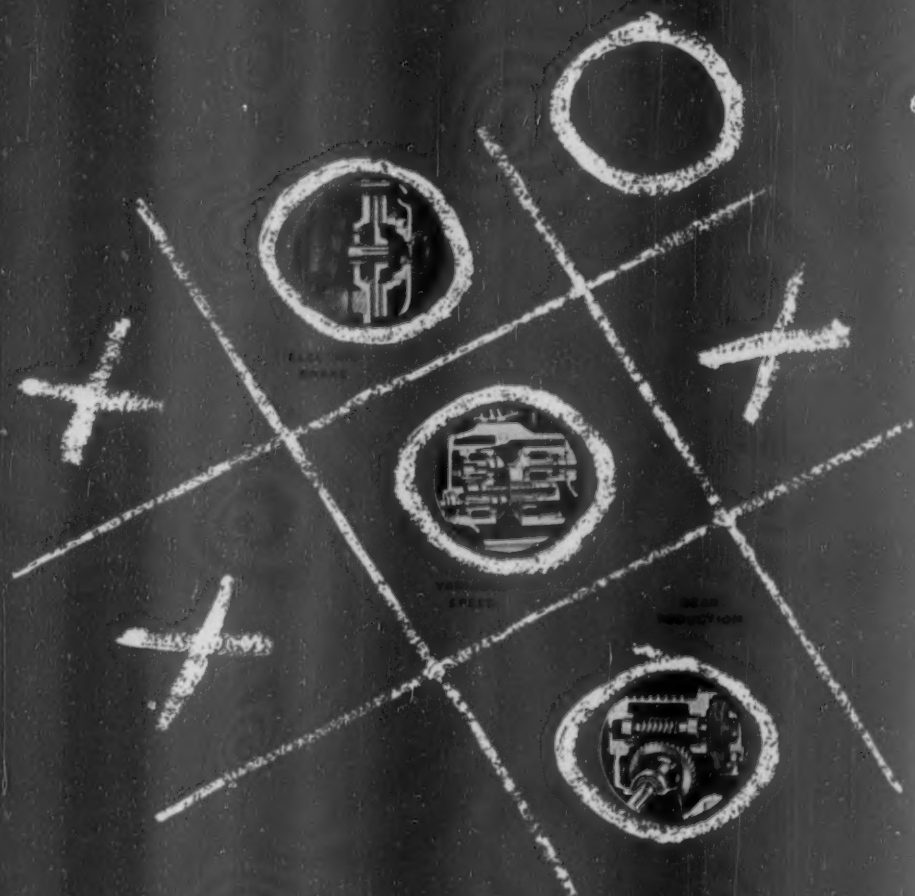
• **Pro and Con**—Westinghouse Corp.'s Weaver, like a number of his colleagues in the industry, pooh-poohs the contention that companies long active in the atomic program enjoy a major advantage over others in the atomic power equipment field. Nearly every company in any slightly related field, he points out, has taken part in some phase of the work done for AEC.

These views aren't shared, of course, by organizations that have suddenly decided to get into the act. And one veteran of many AEC jobs concedes firms like his have certain advantages.

"For example," he explains, "we have several hundred technicians and clerical people cleared by the government to handle atomic data. It takes three to six months to get initial clearance. Once a person has been cleared, if he lets his clearance lapse on completion of a specific job, he can usually get reinstated in four to five weeks. You'd be surprised how helpful it is to have a large staff, including secretaries and clerks, able to handle confidential data."

• **Spread Around**—But such advantages, in varying degrees, certainly have accrued by now to large numbers of companies. For example, AEC estimates that no less than 3,500 different companies supplied subassemblies for a single reactor project.

Again, last November, Nucleonics, a McGraw-Hill publication, listed 1,000 suppliers of equipment and materials for atomic development. The same magazine previously had listed more than 100 individuals and companies offering consulting services in the atomic field.



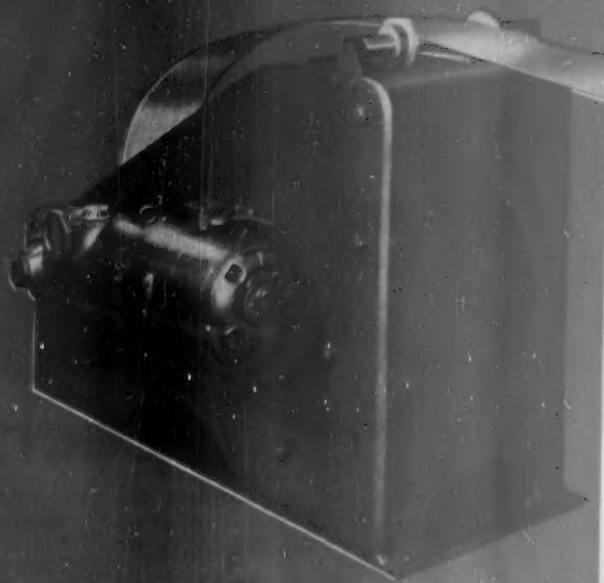
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Rails Get Off To Bad Start In 1954

Revenues Have Slipped
Well Under 1952

... And the Skid of Earnings
Has Been Much Sharper.

	Jan.-Apr. Revenues					Jan.-Apr. Net Income				
	1954	1953	1952	Change 1954 vs.	1953	1954	1953	1952	Change 1954 vs.	1953
TRANSCONTINENTALS										
Atch., Topeka & Santa Fe	\$172.3	\$204.9	\$191.4	-10%	-16%	\$17.6	\$26.0	\$20.6	-14%	-32%
Chic., Milw., St. P. & Pac.	74.4	84.3	84.5	-12	-12	D0.8	2.7	1.0	-	-
Great Northern	68.0	73.7	70.3	-3	-8	0.6	3.6	2.6	-77	-83
Northern Pacific	50.4	55.7	51.2	-2	-9	D0.9	2.7	D0.2	-	-
Southern Pacific	195.5	230.7	222.4	-12	-15	13.6	22.0	18.2	-25	-38
Union Pacific	148.6	165.3	157.2	-5	-10	19.4	19.9	17.9	+8	-2
SOUTHWESTERN ROADS										
Chic., Rock Is. & Pac.	\$60.9	\$70.8	\$69.0	-10%	-14%	\$4.6	\$8.9	\$6.3	-27%	-48%
Missouri-Kansas Texas	24.2	29.1	28.0	-14	-17	0.9	2.4	2.2	-59	-62
Missouri Pacific	70.1	80.2	78.9	-11	-13	1.3	4.1	4.0	-67	-68
St. Louis-San Francisco	42.1	46.4	43.6	-3	-9	1.7	3.5	2.8	-39	-51
Texas & Pacific	26.4	29.8	26.7	-1	-11	2.1	3.6	2.5	-16	-47
GRANGER ROADS										
Chic., Burl. & Quincy	\$82.9	\$89.3	\$81.9	+1%	-7%	\$8.7	\$9.5	\$7.0	+24%	-8%
Chic. & North Western	57.3	63.9	62.9	-9	-9	D4.9	D1.3	D4.0	-	-
NORTH-SOUTH CARRIER										
Gulf, Mobile & Ohio	\$28.0	\$31.8	\$29.9	-6%	-12%	\$2.0	\$3.2	\$2.5	-20%	-37%
Illinois Central	91.7	100.7	100.0	-8	-9	4.8	7.6	5.8	-17	-37
Kansas City Southern	14.1	16.9	16.1	-12	-1	#2.5	#3.0	#2.7	-7	-17
SOUTHERN ROADS										
Atlantic Coast Line	\$57.1	\$62.8	\$66.3	-14%	-9%	\$4.8	\$5.0	\$7.0	-31%	-4%
Louisville & Nashville	67.3	78.5	77.5	-13	-14	6.0	10.2	8.5	-29	-42
Seaboard Air Line	54.2	59.0	58.6	-7	-8	6.4	7.8	6.8	-6	-11
Southern Ry.	83.3	93.1	89.2	-7	-10	7.7	10.8	5.8	+30	-29
POCAHONTAS ROADS										
Chesapeake & Ohio	\$95.4	\$109.9	\$120.5	-21%	-13%	\$8.9	\$12.7	\$13.3	-33%	-30%
Norfolk & Western	52.9	59.9	68.1	-22	-12	4.6	6.4	8.4	-45	-28
Virginian Ry.	11.6	12.7	16.5	-30	-9	1.5	1.7	2.7	-44	-12
EASTERN CARRIERS										
Baltimore & Ohio	\$132.2	\$148.3	\$147.9	-11%	-17%	\$3.9	\$7.6	\$7.2	-46%	-49%
Erje	50.4	59.7	58.6	-14	-16	1.6	3.6	3.2	-50	-56
New York Central	236.7	273.7	264.4	-11	-14	0.1	10.3	0.2	-50	-99
N. Y., Chic. & St. Louis	46.0	55.2	53.2	-14	-17	3.6	6.1	5.7	-37	-41
N. Y., N. H. & Hartford	49.7	54.2	53.9	-8	-8	D1.1	1.6	1.6	-	-
Pennsylvania	278.5	340.7	343.6	-19	-18	D9.2	10.6	4.7	-	-
ALL CLASS 1 ROADS (E)	\$3,040.7	\$3,501.2	\$3,435.4	-11%	-13%	\$128.0	\$262.0	\$197.3	-35%	-51%

HB—All dollar figures in millions. D—Deficit. #—Net railway operating income. E—Estimates of American Assn. of American Railroads.

BUSINESS WEEK

The Prospects Continue Dark

Plenty of smart Wall Street rail analysts think 1954 shapes up as an unhappy year for the roads. They are predicting that:

Gross revenues will probably be the

lowest the industry has seen since 1950.

Earnings are shaping up as the poorest since 1949.

Obviously, there is still time for plenty of new developments to upset

these glum predictions of what will show on the books of the Class 1 lines at the end of the year. (That means the 130 systems with annual revenues over \$1-million, a group that operates

more than 95% of the nation's rail mileage and handles more than 99% of freight and passengers traveling by rail.) But, as of now, the experts are sticking with these prophecies.

Gross revenues, they say, will be in the area of \$9.5-billion to somewhere over \$9.6-billion. At that rate, there would be a drop of 9.5%-10.9% below last year, 8.8%-10.2% below 1952, and 7.1%-9.6% below 1951.

The seers find the picture even less alluring on net income, which they think will run from \$675-million to as low as \$650-million. That would mean a 22.5%-25.4% drop from last year, 18.1%-21.1% from 1952, 2.4%-6.3% from 1951, and 14%-17% under 1950.

• **Figures Talk**—Morose as these predictions are, they cannot be laughed off as a product of the almost automatic bearishness toward the rails that has cropped up so frequently in recent years. The prophets can cite some pretty solid statistical backing.

Indeed, January-April operating performances make even the gloomiest predictions seem optimistic. The table (left) shows that Class 1 gross revenues for the period are off 13.2% from the 1953 period, with net down a vertiginous 51.1%.

• **Omens**—These drops came as no surprise to the Wall Street rail analysts. Months ago, they had seen the first warning lights (BW-Oct.17'54,p62). At that time, the analysts began to worry over the possibility of the business setback that has since occurred. Even the optimists foresaw a moderate drop in industrial activity. Bulls and bears agreed then on one thing: **Whatever might happen, the durable goods trades would be hit the hardest.** In this, all hands were right.

Oppressed by this fear for durable goods, many Streeters began to pull in their horns on the rails. Heavy goods, and the raw materials from which they are made, provide the carriers with most of their bread and butter.

Clearly, any falling off in the movement of durable goods would hurt the rails. The carriers, unlike most industries, cannot quickly adjust their operating costs to a drop in "sales." A large part of their costs are relatively fixed. This provides a delightful leverage when gross revenues shoot up. But it works just as vigorously in reverse. A 10% drop in loadings can mean a much heavier loss in net.

The first four months of this year provide a fine example of this. Loadings fell off only 17% and gross revenues only 13%, yet net income crashed down by 51%.

• **Downgrade**—The railroads have lost a lot of potential business to competing forms of transportation in the past 25

years. Thus, industrial production has doubled since 1929, but freight ton-miles of the railroads are up only 45%. In the same period, population has increased tremendously, but passenger traffic is off 40%.

Rising taxes and operating costs—especially wages—have had an equally debilitating effect. Massive postwar boosts in passenger and freight rates have failed to offset rising costs. Gross revenues have climbed to record after record in postwar years, but profits have not kept pace. Last year's gross was \$4.31-billion above 1929, but net was \$22-million below the boom year.

The basic unfavorable trend has pressed more heavily on some areas than on others. Its effects have been worst in the Northeastern quarter of the country, despite the fact that the railroads there as a group have more potential customers per square miles than systems located elsewhere. Various factors have made life easier for the non-Eastern lines:

- **Industrial relocation and expansion** has boosted their gross, enabling many once predominantly agricultural carriers to up industrial traffic.

- **The non-Eastern lines generally** have longer average freight hauls. This leaves them less vulnerable to truck competition than their Eastern cousins, and cuts down on costly car handling and yard and terminal facilities.

- **Their passenger hauls** are longer, too, and so more profitable. On top of that they have little of the Eastern affliction of unprofitable commuter, local, and branch-line services.

- **Spring Figures**—It is still too early to calculate rail profits for May. But most analysts think that both May and June will be juicier than the earlier part of the year.

This cautious optimism isn't enough to generate much enthusiasm for the rails in Wall Street, despite the widespread belief that the 1953-1954 recession is over. Most analysts seem to go along with Standard & Poor's yea-and-nay opinion that: "Year-to-year earnings comparisons in coming months should be decidedly more satisfactory than those to date . . . assuming the traffic decline has bottomed out, that further progress will be made in trimming costs, and that pending wage cases will be settled along the lines of those made with certain operating groups."

- **Union Demands**—That matter of wages, though, is still in the lap of the gods.

On the hopeful side, from the industry viewpoint, are the three big operating unions that have settled for a 5¢-an-hour wage boost plus longer vacations for older workers. If this pattern should



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Manager, North Carolina Works
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extend to all the unions in the industry, management would get off with a \$200-million boost in its annual wage bill before taxes, and only \$100-million after taxes.

However, a Presidential fact-finding board has recommended "fringe" benefits for the nonoperating unions which

would up rail costs about \$150-million annually.

The 215,000-member Brotherhood of Trainmen will also make new wage and fringe demands this week. And the 100,000-member Brotherhood of Locomotive Firemen & Enginemen will demand a 28¢-an-hour raise.

Racing for the Pot of Uranium

Utah's feverish penny ante uranium stock boom gets more hectic, and Eastern financiers get out their Geiger counters—though some stock analysts take dim view.

Fast-booming uranium ventures are crowding into the financial spotlight again, with well-established and astutely managed firms jostling Johnny-come-latelies for a place in the center of the stage.

- **Floyd Odlum's Atlas Corp.** last week acquired control of Lisbon Uranium Corp., a fabulous enterprise whose shares have climbed from 20¢ each to over \$3 in less than six months.

- **Two top-flight gas producers**—El Paso Natural Gas Co. and Western Natural Gas Co.—announced they are invading the uranium exploration field through a new venture, Rare Metals Corp. Rare Metals will prospect for uranium on the Utah, Colorado, Nevada, and New Mexico properties of El Paso and Western.

- **In Salt Lake City**—hub of the country's uranium share trading—the epidemic of uranium fever rages unabated (BW—Apr. 3 '54, p. 140).

- **Frenzy**—Most spectacular of these developments by far is the mounting eagerness—amounting almost to frenzy—of little investors in Utah and elsewhere to get a few bucks down on uranium shares. In Salt Lake City you don't need a Geiger counter to hear the clicks of the small change going into uranium stocks at a few pennies, or even one penny, a share.

Brokerage offices find themselves besieged by businessmen, housewives, plumbers, doctors, all begging brokers to "sell me some uranium stock," sometimes without even asking the name of the issue.

Uranium fever appears to be highly contagious, though—even at long distance. Salt Lake City brokers say they can't handle all the telephone orders pouring in from New York, Chicago, Houston, Dallas, and other financial centers.

The boom in uranium stocks has been under way for some time now, but old-timers watching the late May and early June splurge were saying they couldn't remember anything like it.

The share buyers have a wide choice

—and it's constantly getting wider. Twenty-two new companies, offering shares at 1¢ to \$1 each, popped up in just nine days. Sixteen were oversubscribed before the public offering.

- **Alarm**—Securities dealers, alarmed by the fever symptoms, urge speculators: "Don't buy wildly unless you can afford to lose money."

The Utah Securities Commission is moving to clamp down somewhat, and has ordered brokers to reduce to 12½% their commission on underwriting new issues.

Some had been charging 20% to 25% on speculative uranium issues.

One thing that has heartened alarmists is the switching of some speculators from unlisted uranium issues to old-line mining companies, listed on the Salt Lake exchange, that have uranium holdings. "At last the buyer knows the company he's buying into has some land and some prospects."

- **Fireworks**—It's the unlisted issues that have been setting off the fireworks, though. Floyd Odlum's new acquisition isn't the only skyrocket. Another unlisted, Timco, sold in April at 6¢ a share; in a hectic four days it soared to 55¢, dropped to 22¢, rallied briefly to 37¢, then skidded to 28¢. Federal Uranium did a similar loop-the-loop—from 1¢ a share it jumped to 22¢ in late May but was back at 9¢ a week later. Uranium, Inc., zoomed from 1¢ to 45¢ and hung there.

- **Dim View**—New York's big brokerage houses take a dim view of the whole "penny" stock business in uranium. Here's why:

Companies producing uranium ore sell it to the Atomic Energy Commission—at an undisclosed price based on the uranium content of the ore. The companies are not allowed to give out information on either (1) uranium content or (2) any reserves the company has.

"It's difficult enough," says one research man, "to analyze a mining stock when you have information on prices received for the product, ore content,

Your business is in the Age of Electronics

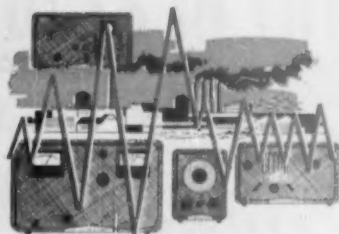


Electronics at work: Electronic test instruments in the new Ford Engineering Research Laboratory include Hewlett-Packard oscillators, voltmeters, wave and noise analyzers, signal generators, and the new, amazingly versatile -hp- electronic counters. Noise level measurements (above) are often made outdoors to reduce the influence of reflected sound on instruments.

At Ford, new electronic test instruments speed research, simplify product testing

A complete electronic test setup makes the new Ford Motor Company Engineering Research Laboratory at Dearborn an engineer's dream. Many engineering problems are solved in a fraction of the time formerly required. The new electronic equipment—much of it supplied by Hewlett-Packard—enables Ford engineers to develop new and improved components, measure speeds, time mechanisms and evaluate stress and strain quickly and with accuracy hitherto unobtainable.

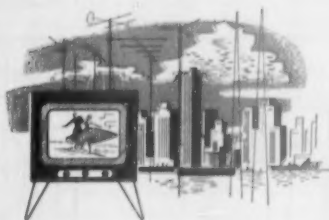
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LEHMAN BROTHERS

June 3, 1954.



and company reserves. It's next to impossible without this information."

• **Hands Off**—The Securities & Exchange Commission has had to adopt almost a hands off policy on the Utah uranium stock boom. One reason is that most of the new companies are formed, and issue and sell stock, only within Utah. And many of them are raising sums of less than \$300,000, so do not have to register the issues with the SEC.

Tightening Up . . .

. . . of Texas insurance laws is in the cards. Shoe-string capitalization, now legal, is under fire.

Texas insurance laws, often raked over the coals in the past, are now facing a major shake-up after a new batch of insolvencies and charges of assorted violations.

Insurance in Texas ranks second only to oil as an industry. There are 1,884 companies with \$20-billion worth of policies in force and an annual \$2.8-billion in premiums. Some of the companies are large and well established but there is a vast swarm of smaller outfits—almost as many as in the entire rest of the U.S.

The state insurance laws provide the friendly climate in which these innumerable little companies proliferate. You can start an insurance company with only \$10,000. Dealings in insurance company stock are not regulated by the state securities commission. A scarcity of examiners and investigators hampers the enforcement of what regulations there are.

• **Failure**—The present mess came to a boil, after long periods of fitful bubbling, when the Texas Mutual Insurance Co. went into receivership on Feb. 11, 1953. TMIC ended its career over \$1-million in debt. Attorney General John Ben Shepperd charged that it had been created through fraud, since half of its \$20,000 capital had been borrowed even before a charter had been granted. Shepperd also said the company jacked up the asset value of a building to \$436,000 from the true figure of around \$90,000.

A secondary court action arose from the fact that TMIC had issued policies stamped "nonassessable," though it was not legally entitled to do so. A lower court approved attempts to assess the policyholders after the failure of the company, but the ruling was reversed on appeal. In concurring with that decision, Justice R. G. Hughes held that there had been "gross if not criminal laxness" in the enforcement

of the state insurance laws in the case. Hughes suggested that the state bar grievance committee investigate the role of TMIC lawyers, including a state senator, W. T. Moore.

In Austin, a grand jury brought perjury indictments against the three founders of TMIC.

• **Other Cases**—The same grand jury brought a similar indictment against Spencer Trehame in the failure of the United World Life Insurance Co. and United Lloyds. The two companies also had expired in a pattern of overvalued assets and borrowed capital.

In all, Shepperd has brought charges against 12 Texas insurance companies since January 1953. Eight cases are in the courts now, and Shepperd says, "We have a number of others under study."

Shepperd and other state officials are pressing for a major plugging of the legal loopholes. Shepperd has called for 29 changes in the laws. His plea: "The loopholes permitting formation and operation of an insurance company on considerably less than a shoestring must be stopped as quickly as possible."

• **Reforms**—The State Board of Insurance Commissioners is probing reasons behind the failure of 60 insurance companies since 1939. It is considering legislation to get stock sales by insurance companies under state supervision (such a measure was defeated last year) and the raising of the ante for starting an insurance company to at least \$150,000. Gov. Allan Shivers has urged the companies themselves to back reforms, chiding them for being "... too interested in using their legislative influence to run competitors out of business rather than to run abuses out of the business."

FINANCE BRIEFS

Indigestion continues to afflict the corporate bond market (BW—Jun. 5 '54, p. 56). Last week Gulf States Utilities Co. postponed sale of \$24-million in bonds, \$16-million in preferred stock.

Stock splits aren't always followed by higher dividend rates. Joseph Bancroft & Sons Co., textile firm, which split its common 2-for-1 in April 1953, announced last week that the quarterly dividend of 15¢, paid regularly since the split, would be passed this quarter.

Interest rates on Federal Housing Administration debentures have been cut 0.25% to keep in line with rates on other government securities. The cut, the first since May 1950, will be from 2½% to 2¼% on 10-year debentures, and from 3% to 2¾% on longer-term paper.

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List of Users

The types of industries listed are all repeat users of **Tru-Lay Push-Pull Controls**. Experimental applications are not shown.

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Bakery Equipment, Boats & Ships
Bottling Machinery
Brewing & Distilling Equipment
Business Machines
Buses & Motor Trucks
Candy Making Machinery
Canning Machinery
Ceramics Machinery
Chemical Processing Machinery
Coal Mining Machinery
Coin Operated Machines
Construction Machinery
Dairy Products Machinery
Dental & Surgical Equipment
Die Casting Machinery, Diesel Engines
Drinking Water Coolers
Electrical Appliances
Electrical Generating Equipment
Electrical Machinery
Electrical Transmitting Equipment
Electronic Equipment
Elevator Control Panels
Fire Protection Equipment
Food Processing Equipment
Forging Machinery
Foundry Equipment
Gas & Oil Production (Test Stands)
Glass Making Machinery
Grain Processing Equipment
Hat Machinery, Heating Equipment
Hydraulic & Pneumatic Equipment
Ice Cream Making Machinery
Laundry & Dry Cleaning Equipment
Leather Working Machinery
Lumber & Saw Mill Machinery
Marine Equipment
Materials Handling Equipment
Metal Mining Machinery
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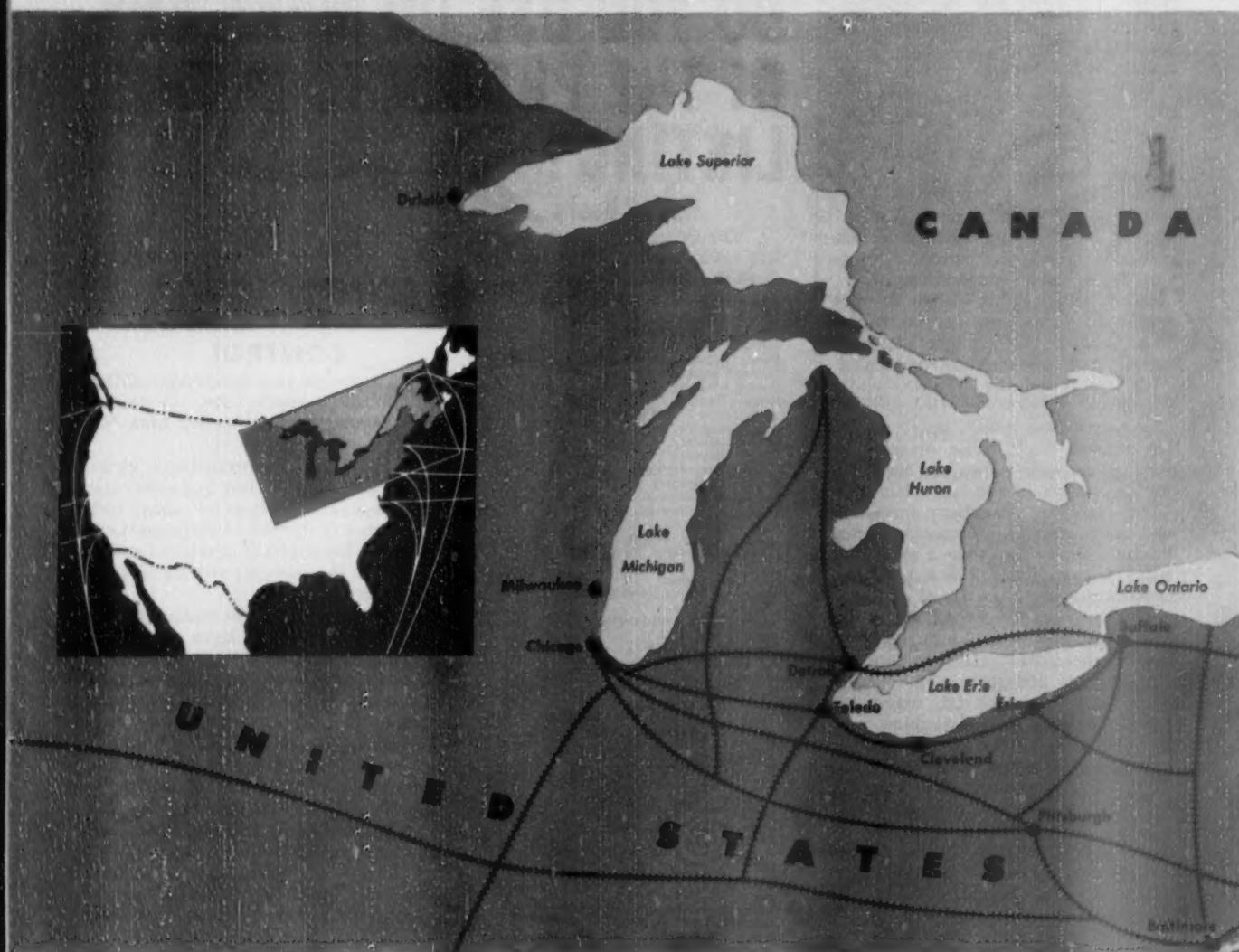
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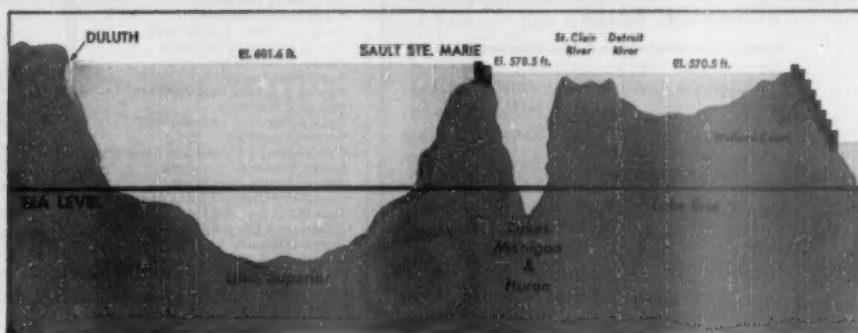
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St. Lawrence: Power for Two Nations and

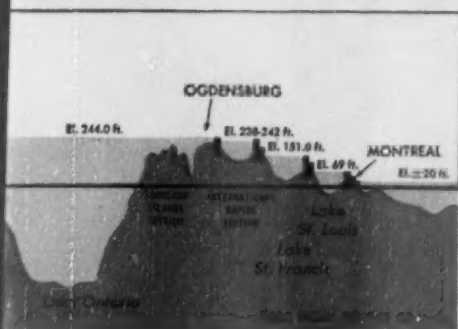
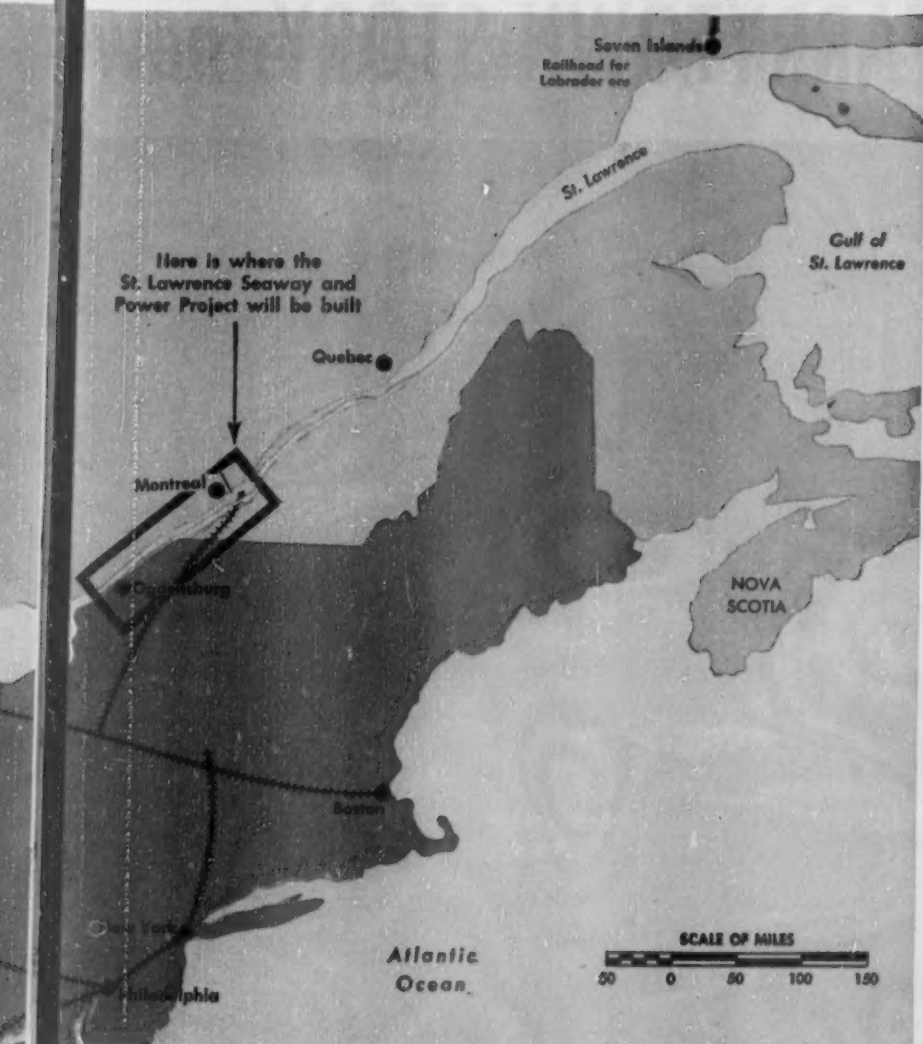
These maps tell the story of two dreams. One envisions a pathway for ships, stretching from the Atlantic Ocean to the heart of the North American continent. The other envisions a giant power project that will put the St. Lawrence River to work for vast

areas of Canada and the U.S. Both dreams are now coming true.

The U.S. public's attention was focused on these projects last month, when Congress passed the so-called St. Lawrence Seaway bill after 30 years of hesitation. This was hailed as a

history-making event. Actually, it was less than that. It merely authorized U.S. participation in a seaway whose construction was already assured.

Early in 1952, the U.S. government agreed to let New York State develop St. Lawrence power in co-



A ship starting from Du-luth will drop more than 600 feet before it reaches sea level at the river's mouth. All the drops have already been bypassed by deep-draft waterways except the Ogdensburg-Montreal section.

a Pathway for Ships

operation with the Province of Ontario. That agreement was necessary; for the power dam must touch both shores of the river.

But once Canada was sure the dam would be built, it no longer needed U.S. cooperation on the seaway. It

forthwith announced its intention of building all the navigation works by itself. Congress then hastened to deal the U.S. in.

But the fact remains that the twin dreams are gaining substance. To see their implications, turn to page 138.

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THE TARRYTOWN STORY: new



TOWN PERMITS NEW USE OF COPPER. Here George F. Ellistells Town Trustees about proposed new building code for Tarrytown, N. Y., to replace their 1929 ordinances. The Board adopted the New York

State "model" Building Code—the 100th community to do so. Today Tarrytowners may build to 1954 standards—not 1929's. They may take advantage of *copper* for home drainage systems.

materials for new homes

THE TOWN FATHERS REPLACED A SET OF BUILDING RULES THAT WERE 25 YEARS OLD. NOW BUILDERS MAY USE MANY OF THE NEW MATERIALS MADE BY COMPANIES LIKE ANACONDA.

The story starts with George F. Ellis. Last year he headed a special citizens' committee in Tarrytown, N. Y., appointed by Mayor Edward N. Vetrano.

The committee's job: to look into a building code that had been law since 1929.

Under this old code, for instance, Tarrytowners couldn't drain their bathtubs through *copper* piping. When the code had been written 25 years before, lightweight copper piping for this use was unknown.

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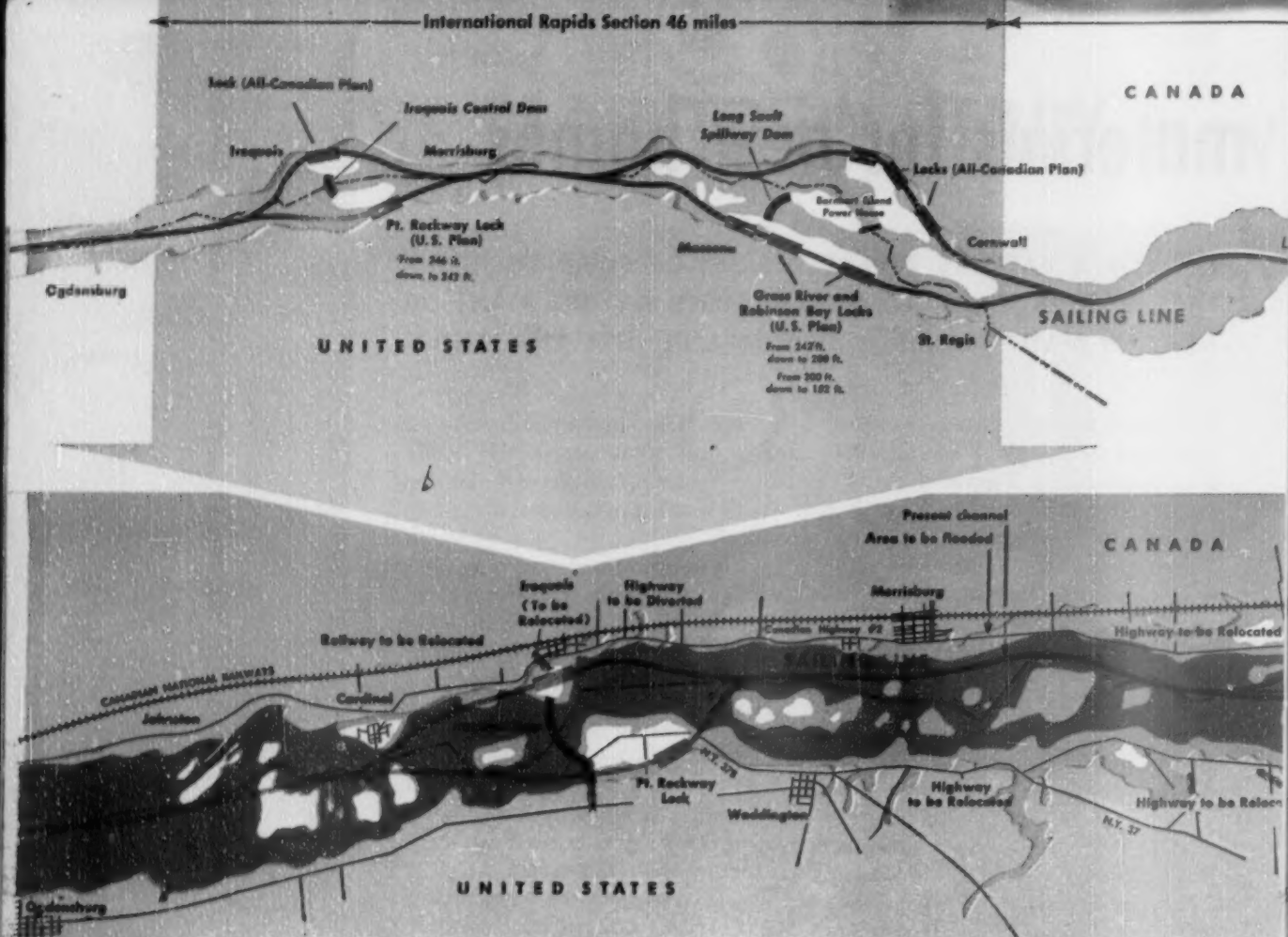
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THE RIVER (upper map): The U. S. will spend up to \$105-million on 27-ft.-deep navigation works in the International Rapids section (lower part of sailing line), and on dredging upstream. Canada will give up its plan to build seaway by itself (upper part of sailing line). It will build 27-ft. works from the rapids to Montreal and deepen canal around Niagara Falls. Cost: about \$200-million.

THE RAPIDS (lower map): New York State and Ontario will spend some \$600-million on two dams—Iroquois and Long Sault—and a 1.9-million-kw. powerhouse on Barnhart Island.

Design for an Economic Impact

Plans for the St. Lawrence River involve two things:

(1) A hydroelectric power plant, squarely athwart the international border, which will produce an estimated 12.6-billion kwh. of electricity annually. Half of this power will go to Canada, half to the United States.

(2) A navigable channel, 27 ft. deep, all the way from Lake Ontario down to Montreal. (Below Montreal there is already a navigable channel even deeper than that.)

These two projects are certain to have a profound effect on the economies of both countries. Just what that effect will be, how far-reaching it will be, and what its timing will be, nobody is yet at all sure.

• **Transportation**—Some of the very long-range effects can be guessed at with a fair degree of certainty. For example,

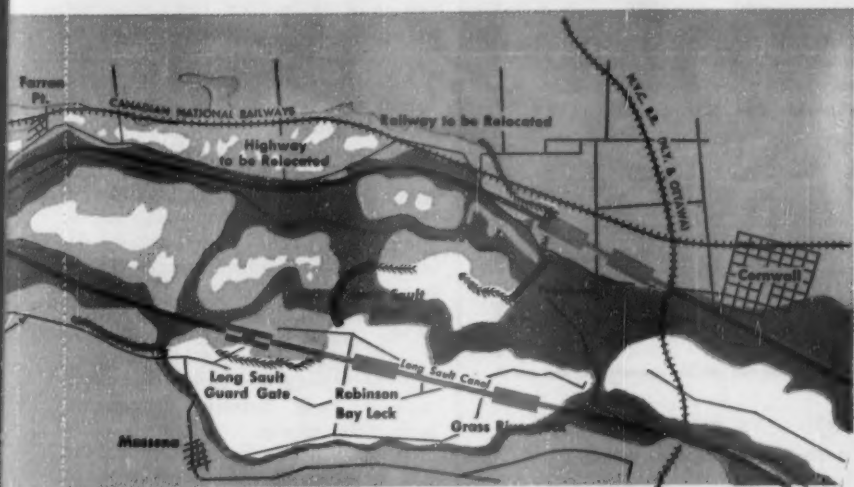
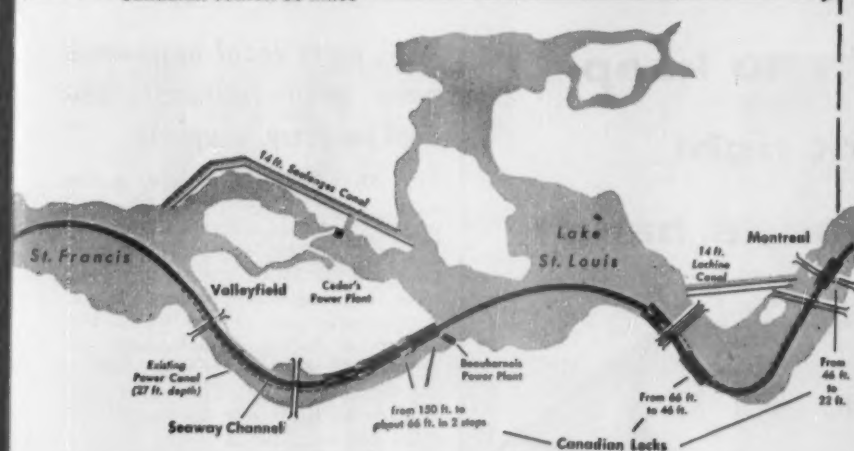
many manufacturers that use imported raw materials have always found it most economical to locate their plants on the coast, even though they distribute their products nationally. There's a strong possibility that, once the seaway is built, many of these will find it advantageous to set up branch plants in the Midwest.

Midwestern companies that have never thought much about exports will gradually take more interest in foreign business and how to develop it. And companies that do a major export business will have less incentive to locate on the coast. U. S. Steel Corp., for instance, had planned gradually to shift much of its production for export from Gary, Ind., and Pittsburgh to its new Fairless Works on the Delaware River. Shifts such as this will be less necessary once the seaway is built. And for the steel industry as a whole, much

of the pressure to move steel mills to tidewater, so as to be closer to imported ore, will vanish once tidewater comes to the steel mills.

• **Power**—Over the shorter range, it's quite possible that the power features of the project will have greater immediate economic impact than the navigation features. The main reason why Canada has been so insistent in recent years about getting the project under way quickly, with or without U. S. help, is that the fast-growing industrial area along the northern shore of Lake Ontario is critically short of power.

New York and New England have not been particularly short of electric power, but power costs more there than in most of the rest of the country. So a tremendous new source of cheap power could do a lot to attract new industry to the area—not only in New



Much dredging will have to be done to assure proper water velocity for the power project; this will also be useful for navigation. Dark gray area of map indicates where water is now; light gray indicates where it will be when the dams are complete. Many railroads, highways, and towns will have to be moved as the water creeps up. Relocation costs are part of New York's and Ontario's expenses.

(Story starts on p. 134)

Hampshire, Vermont, and upstate New York, which have never had much industry; but also in Massachusetts, Rhode Island, and parts of central New York, where the exodus of the textile industry has left large areas in a bad way.

Upstate New York has large undeveloped mineral resources. The new cheap power could also be a tremendous boost to economically sound development of these resources.

• **Self-Interest**—When you try to appraise the shorter-range effects of the seaway itself, however, the crystal ball gets pretty badly clouded. Over the many years that the wisdom of building the St. Lawrence project has been debated, proponents and opponents have come up with a multitude of predictions. Because of the highly controversial nature of the project, how-

ever, very little of this forecasting has been completely factual and unbiased.

One witness before a Senate committee was very frank about it. He was asked by a senator whether his testimony might not perhaps be somewhat colored by his own economic self-interest. And he replied: "I would be suspicious of anyone appearing before a Congressional committee who expressed pure disinterest."

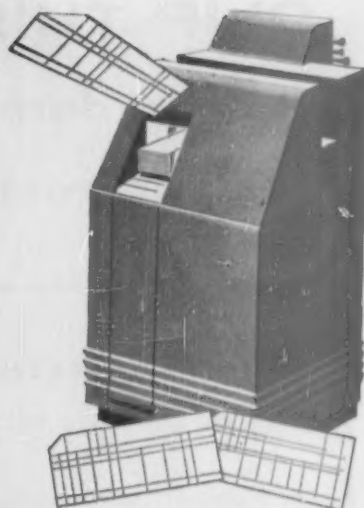
Nevertheless, the directions taken by the major arguments—even though possibly biased—are bound to cover the important areas in which the economic effects of the seaway will be felt.

• **Pro**—Among the principal arguments in favor of the seaway:

• It will open new world markets to products of the Midwest by reducing transportation costs between the Midwest and overseas points.

• It will lower the cost of many imported raw materials to midwestern manufacturers and other consumers.

• It will be a boon to that large



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"... most vocal opponents have been railroads, the coal industry, seaports . . ."

ST. LAWRENCE starts on p. 134

part of the nation's steel industry that lies between the Appalachian Mountains and the Mississippi. It will make more readily available, at less expense, the overseas iron ore on which this country is becoming increasingly dependent as the high-grade deposits in the Mesabi run out. This applies particularly to the newly discovered Labrador iron ore deposits.

- It will help national defense by cutting 1,000 mi. off the open-water distance to Europe in case of war, and by providing a completely submarine-free source of imported iron ore (from Labrador).

- Eventually, it will result in a major expansion in the total economic activity of the whole area on and tributary to the Great Lakes, and therefore of the country as a whole, just as every major new transportation development has done throughout the history of the nation.

- **And Con**—The most vocal opponents of the seaway, over the years, have included the railroads, the coal industry, and the Atlantic and Gulf Coast ports. Among their principal arguments against the seaway:

- It will take business away from the Atlantic and Gulf Coast ports by carrying foreign trade directly to and from Great Lakes ports.

- It will take business away from the railroads for the same reason: Goods moving direct by sea to or from the Great Lakes will not have to move by rail between the Middle West and the East Coast.

- At the same time because the seaway will be icebound some five months each year, the rails and the old-line ports will have to keep their facilities on standby to handle the traffic during these months.

- It will hurt the coal industry by encouraging imports of foreign coal.

- It will be a drain on the taxpayers. Proponents' traffic estimates are completely unrealistic, the opponents maintain, and the tolls to be collected will fall far short of meeting operating expenses plus interest and amortization.

- It will open the Midwest to cheap imports of foreign-made goods.

- The 27-ft. draft of the seaway will discriminate against U.S.-flag shipping, since most American ships draw more than 27 ft. of water, while many foreign ships are within the 27-ft. limit.

- The cost of the seaway itself will be only the beginning. Once the

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seaway is completed, or even before, there will be increasing pressure on Congress to spend hundreds of millions of dollars deepening and widening channels and harbors on the Great Lakes, since practically no harbor there today can accommodate vessels of 27-ft. draft.

I. The Impact

There is little question that most of these arguments, on both sides, contain a good bit of truth. But how much, in each case, can only be guessed at.

Take coal, for instance. The United Mine Workers, as well as many coal operators and operators' associations, insist that the seaway will make it easier for foreign coals to compete with U.S. coal in the Midwest. Proponents of the seaway counter that foreign coals have never made a serious dent in the East Coast market, which they can already reach with all-water transportation, so there's no reason to fear them in the Midwest. It's much more likely, these voices say, that the seaway will help U.S. coal interests compete for the market in the Canadian province of Quebec.

• **Draft**—Or take the argument about whether the 27-ft. draft is enough for U.S. ships. There is no question that some 85% of U.S. ships by number, and more than that by capacity, would scrape the bottom of the seaway when fully loaded.

But, say the proponents of the seaway, Liberty ships can use the seaway when loaded to 85% of capacity, Victory ships when loaded to 79%. The weight of fuel used in a transatlantic voyage, by itself, could make most of that difference. On this basis, the proponents say, more than 75% of our merchant fleet will be able to use the seaway profitably.

• **Traffic**—The question of whether the old-line ports and the rails will lose, and how much, is tied in with the question of how much traffic will actually use the seaway.

There have been a good many estimates of the potential traffic on the seaway. A few years ago, the Commerce Dept. made an official estimate that this traffic would be somewhere between 57-million and 84-million tons a year. The minimum included 30-million tons of iron ore, 64-million tons of grain, 6-million of petroleum, 4-million of coal, and 11-million of general cargo.

These estimates seem a little high, at least for the early stages of the seaway's existence. For one thing, the Welland Canal, which bypasses Niagara Falls and would become part of the pathway into the Midwest, can't carry this much; its maximum practical capacity is somewhere in the neighbor-

hood of 50-million tons a year. (That capacity could be sharply increased, however; three of its eight locks are now twinned, and twins could be built for the other five.) Another reason to believe that the Commerce estimate is on the high side is that the department, when it made the estimate, was very much an active advocate of the seaway.

• **Canada's Guess**—Perhaps the best estimate available today is one made about a year and a half ago by the Canadian government. Since it was absolutely certain at that time that the seaway would be built—Canada had publicly stated its determination to work alone if need be—the forecasters had no ax to grind except that of getting the most accurate estimates possible.

This survey forecasts a total of 44½-million tons annually. Of this, an estimated 18-million tons will move downriver—including 10-million tons of grain and grain products, 3-million of soft coal, 1½-million of iron and steel. And 26½-million tons are estimated to move upriver, including 20-million tons of iron ore.

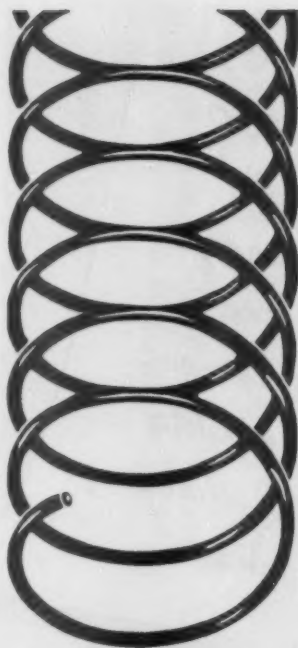
Even this estimate can't be banked on. The ore figure, for instance, seems a bit high, at least for the seaway's first few years. The Labrador mines will be producing only 10-million tons annually at first, and not more than 60% to 70% of that is likely to move up the St. Lawrence. And while some other foreign ores will undoubtedly use the seaway, they probably won't total 13-million tons.

• **Revenue**—On that basis, will the seaway pay its way? The U.S. and Canadian governments think it will. Official construction cost estimates of the seaway alone at December 1952 price levels come to \$286-million for both countries, including interest cost during construction. Add 10% for the rise in costs since then, and you get \$315-million. This could be paid off in 50 years at the rate of \$18½-million a year.

The 44½-million tons estimated by Canada would produce revenues of \$27½-million on the basis of the proposed toll schedule. Even if you arbitrarily lop off 10-million tons of ore (at 50¢ a ton) you still come out with \$22½-million.

• **Ghosts?**—What about the effect on the ports and the railroads? For the first few years, at least, the seaway is bound to hurt some. How much depends on whom you talk to.

The rails say that just about every ton that moves over the seaway will be traffic that would have moved over the rails if there were no seaway. Seaway advocates estimate that less than half of it will be traffic that uses the rails now, and that it's not fair to count such traffic as the Labrador ore, which has not yet moved at all. Besides, they



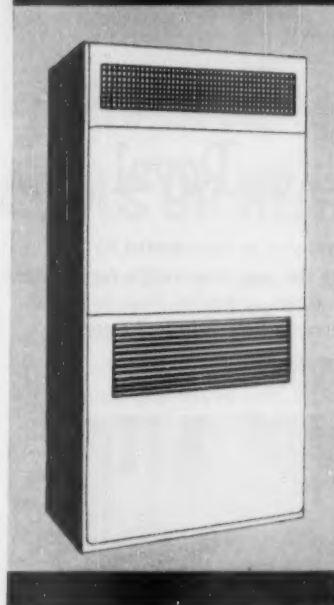
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say, it's certain that the new low-cost transportation of the seaway will cause a lot of new traffic to move that would never have moved at all by the existing higher-cost transportation.

The same arguments boil in the old-line port cities. The Port of New York Authority has estimated it will lose 3.6-million tons a year, which comes to 16% of its total dry-cargo foreign trade. Baltimore is afraid of losing its profitable wheat exports; New Orleans is sure a lot of trade that formerly used the Mississippi will now use the St. Lawrence instead; Baltimore and Philadelphia are both unhappy about the Labrador ore imports they won't be asked to handle.

Seaway proponents use the same answers here as they use against the railroads. And they add that, over the long run, the total amount of trade will be greatly increased as a result of the seaway.

In the meantime, the loss of business will spur the ports to modernize their facilities and to speed up and make more efficient their cargo-handling procedures in order to compete. For the rails, this initial loss of business will be an added spur toward bringing their rate structure more in line with costs—a reorganization already thought long overdue (BW-Mar.20'54,p102).

• **Balance**—Perhaps the most basic question of all is what effect the seaway will have, over-all, on imports and exports. And it's precisely here that the crystal ball becomes completely opaque.

If you make it cheaper to ship American products overseas, won't that help U.S. manufacturers sell more in foreign markets? Of course. But if you make it cheaper to ship foreign products to the Midwest, won't that help foreign manufacturers sell more here, and thus challenge U.S. companies? Of course.

Then will U.S. manufacturers gain or lose, on balance? Nobody knows. Perhaps the best answer—it's certainly the most optimistic—was given to **BUSINESS WEEK** by a Commerce Dept. official last week: "Over the long pull, if you increase total trade—both ways—everybody will be better off."

• **More to Come**—The anti-seaway argument that "the cost of the seaway itself is only the beginning" is a strong one. Completion of the seaway will provide a 27-ft.-deep channel only as far as Toledo, at the western end of Lake Erie (map, page 138). Beyond this, the Detroit and St. Clair rivers, between Lake Erie and Lake Huron, and the St. Marys River, between Huron and Superior, have only 21-ft. channels.

Once the seaway is built there is bound to be pressure on Congress from the lake ports west of Toledo, which

don't want to see the Lake Erie ports get all the gravy, to deepen these channels to 27 ft. Back in December 1950, the Army Engineers made a rough estimate of the cost of deepening the upper Great Lakes channels, including a small amount of work that's needed in Lake St. Clair and the Straits of Mackinac. The total came to \$90-million at that time; it would be more today.

II. The Lake Ports

The lake ports themselves are in no shape to accommodate the expected traffic. Their harbors are not deep enough to take 27-ft. vessels, and their cargo facilities are mostly inadequate to handle any major increase in trade. Rivers and harbors are a federal responsibility, so Congress will undoubtedly be asked for funds to put the harbors into shape. Estimates of the eventual total cost of this work run all the way from a few millions to a few billions.

Cargo facilities are the responsibility of the ports themselves, and all the big ones are already giving a lot of thought to the problems coming up. Here's a quick rundown of how things stand in a few of the major ports, as shown by a **BUSINESS WEEK** survey last week:

Duluth-Superior: Both have long been strong seaway supporters. Duluth Chamber of Commerce has been studying foreign trade possibilities since 1949. City councils of both cities are considering plans to reactivate dormant port authorities. Harbor now has 14 commercial docks—eight in Duluth, six in Superior. But only two have any mechanical cargo-handling facilities. All are privately owned. There's a generally recognized need for modernization—particularly for up-to-date freight-handling equipment.

Milwaukee: Already an active general cargo port. Has had a functioning port authority since the 1920s. Has long been an active seaway supporter, and all port planning has been done with the seaway in mind. As a result, "port development is way ahead of where it needs to be to handle present volume." Has detailed plans for further improvements before seaway is completed.

Chicago: Development of lakefront as a nearly continuous park area severely limits land available for port development. Only one of Chicago's five present harbors can be developed for ocean shipping. Congress has authorized a \$182-million development project for Lake Calumet—part of that one harbor—and the so-called Cal-Sag channel, which connects it to the inland waterways system, but so far has not backed the authorization up with appropriations. The Chicago Regional Port District, set up by the legislature



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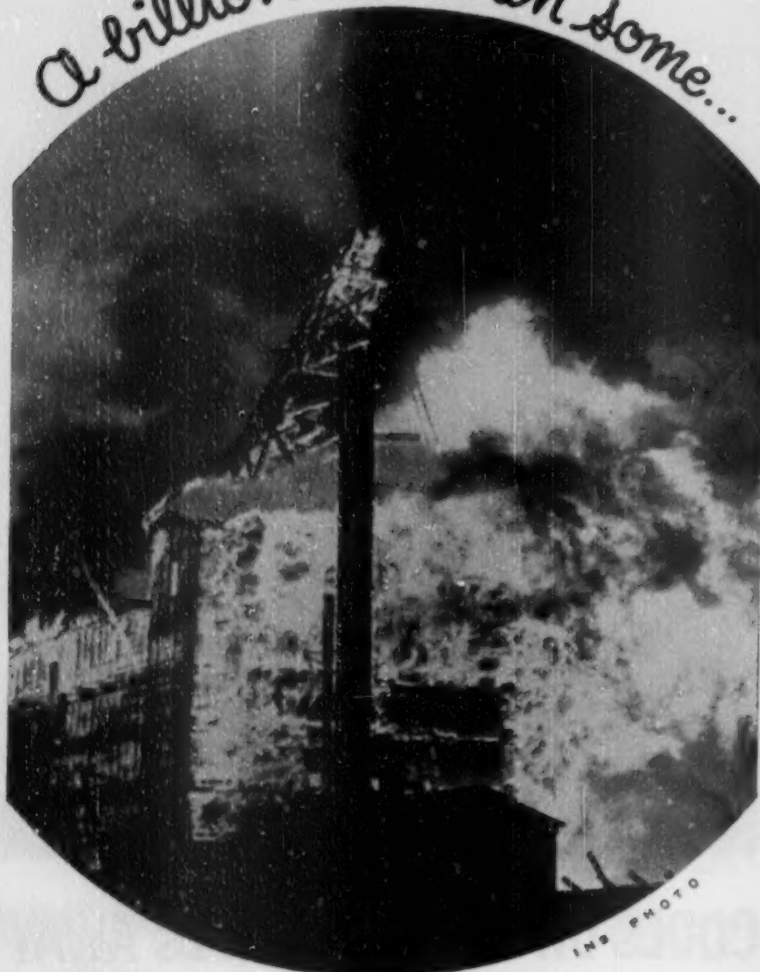
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in 1951, has a two-stage, \$70-million plan for construction of facilities along Lake Calumet, hopes to have the first stage done within two years.

Detroit: Has a port commission, but it's mostly inactive. Has only two commercial terminals for general cargo, with total wharf space for only two large and two small freighters at a time. Port commission estimates need for \$25-million of added facilities but as yet has no plans on how to go about getting them. There is little waterfront land available.

Toledo: Already a major port; handled 26-million tons last year, mostly bulk products. Has excellent natural port on Maumee River, with straight, wide channel already 25 ft. deep and easy to deepen. Expects a few years' headstart on upper Great Lakes ports until connecting channels are deepened. Most docks are owned by individual industries, and are used only by the owners. Only one general cargo pier; city recognizes need for more facilities. Had detailed study made in 1952, is updating it now. Hopes to get O.K. from legislature during the next year to set up port authority, which will develop and carry through detailed plans.

Cleveland: Four stevedoring and warehouse companies operate nine general cargo piers. Most Clevelanders feel that these piers, if renovated and improved to handle deep-draft ships, will be able to take care of all seaway business—at least at the start. There is plenty of land in the outer harbor if more facilities are needed eventually. City has a full-time paid port director; mayor has set up a Seaway Advisory Commission made up of businessmen; council has O.K.'d a \$40,000 survey of the seaway's effect on Cleveland and how the city can best prepare for it.

Buffalo: A traditional foe of the seaway, city is having a hard time reorienting its thinking. Will probably ask legislature next year for O.K. to set up port authority. When and if things ever get past talk stage, city has a \$23-million blueprint for action, as result of a \$50,000 port survey by outside engineers in 1951. Present facilities (other than those part of a plant or mill) comprise only six waterfront warehouses; only two have wharves capable of accommodating ocean shipping; all are in need of repair.

Rochester: City plans a survey of port possibilities and needs—its first in 20 years. Doesn't expect too much benefit from seaway because of proximity to Atlantic seaboard in general, New York City in particular.

III. Man vs. Nature

The St. Lawrence River is an 1,100-odd-mile channel that connects the

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See facing page for details
of this great opportunity

Great Lakes with the Atlantic Ocean. From a broader viewpoint, the Great Lakes, the St. Lawrence River, and the Gulf of St. Lawrence form a continuous waterway that extends from the Atlantic Ocean into the very center of the North American continent. From the mouth of the Gulf of St. Lawrence it's 2,340 mi. by water to Duluth, at the head of Lake Superior; 2,250 mi. to Chicago, at the head of Lake Michigan.

Most of this distance is deep water, easily navigable. But a few sections are either shallow or consist of waterfalls or rapids (map, page 134). As a result, navigation from one end of the waterway to the other has never been possible. And perhaps the worst bottleneck has been the 182-mi. stretch of the St. Lawrence River from Lake Ontario down to Montreal. Here the river, passing through several stretches of swift-running rapids, drops some 225 ft. in level.

• **Trics**—For more than two centuries, men have tried to construct navigable channels around these rapids. The first crude, wooden locks, just above Montreal, are said to have been built as early as 1700. By 1847, the entire stretch was paralleled by 9-ft.-deep canals, all on the Canadian side; by 1903 Canada had deepened them all to 14 ft. In the meantime, the other major bottlenecks in the Great Lakes were also being broken—particularly by the Soo Canal, built by the U.S. between Lake Huron and Lake Superior, and the Welland Canal, built by Canada to bypass Niagara Falls between Lake Erie and Lake Ontario. By 1942, locks 30 ft. deep over the sills had been built in both of these canals. All other channels throughout the main Lakes waterway had been dredged to at least 21 ft. in depth. But the St. Lawrence canals remained at 14 ft., and still do.

• **Common Job**—The 182 mi. of the St. Lawrence River from Lake Ontario down to Montreal is commonly divided into three sections. First comes the Thousand Islands section, some 68 mi. of deep, smooth water from the start of the river down to about Ogdensburg, N. Y. The International Rapids section is 46 mi. of white water from Ogdensburg to St. Regis, N. Y.; the level of the water drops 91 ft. over this stretch. Over these two sections, totaling 114 mi., the St. Lawrence forms the international boundary between the U.S. and Canada. The remaining 68-mi. section down to Montreal is entirely within Canada.

IV. Seaway vs. Congress

Since so much of the river lies right along the border, it has always seemed sensible that it be developed jointly by the two countries. As far back as 1895, the two set up a joint commission to

study the idea of a deepwater channel in the St. Lawrence. It reported favorably—as has every other international group that has ever looked into the idea.

Things moved along very slowly, as does almost everything that must be negotiated through international diplomacy. It wasn't until 1932 that a complete plan for a St. Lawrence seaway and power project was drawn up by a joint board of engineers, approved, and put into the form of a treaty. Everything seemed all set.

But the United States Senate refused to ratify.

• **Delay**—In 1941 the engineering plans were brought up to date, and embodied in an international agreement. (A treaty requires a two-thirds favorable vote of the Senate; an agreement requires only a majority vote—but of both houses.) Year after year, joint resolutions were introduced in Congress to approve the agreement. One after another, they died.

In the meantime, a dispute had arisen over who should have the right to develop this country's share of the river's power resources. It has been said that the International Rapids section is probably the greatest single undeveloped source of hydroelectric power on the North American continent. The drop in water level is 91 ft., and there is an average flow, observed over an 80-year period, of 237,000 cu. ft. per sec.

In most hydroelectric projects the maximum and minimum natural flow differ very widely. At the Bonneville Dam site in the Columbia River, for instance, the ratio of maximum to minimum flow was 33 to 1. Most hydroelectric projects require the building of huge storage reservoirs to hold back the water, and thus compensate for the undependable flow.

The St. Lawrence, however, already has five tremendous storage reservoirs—the Great Lakes. As a result, its flow is very dependable; the ratio of maximum to minimum flow observed over the entire 80-year period is only 2.2 to 1. The power potential of the works now planned for the International Rapids is 1,881,000 kw. of installed capacity.

• **Dispute**—New York State has long felt that it should have the right to develop this power rather than the federal government. In 1931 the state legislature set up a New York State Power Authority for the purpose of developing St. Lawrence power. But the authority could not go ahead without federal permission—both from the Federal Power Commission (to develop the power) and the State Dept. (to deal with a foreign government).

And that was not forthcoming, for the simple reason that the federal government wanted to develop St. Lawrence power itself, through the Interior Dept. So St. Lawrence legislation embodying both power and navigation was

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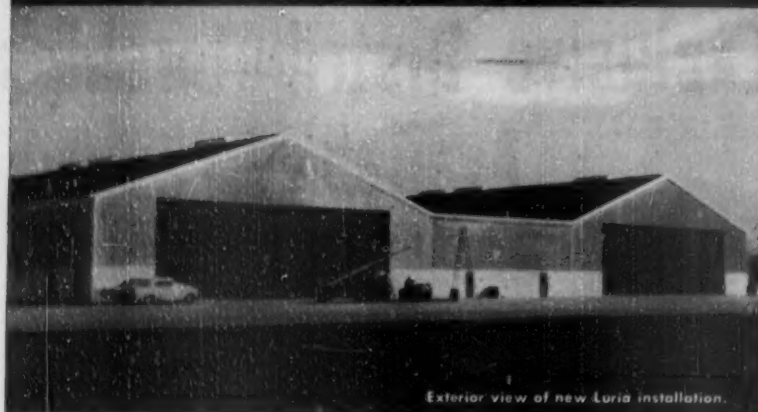
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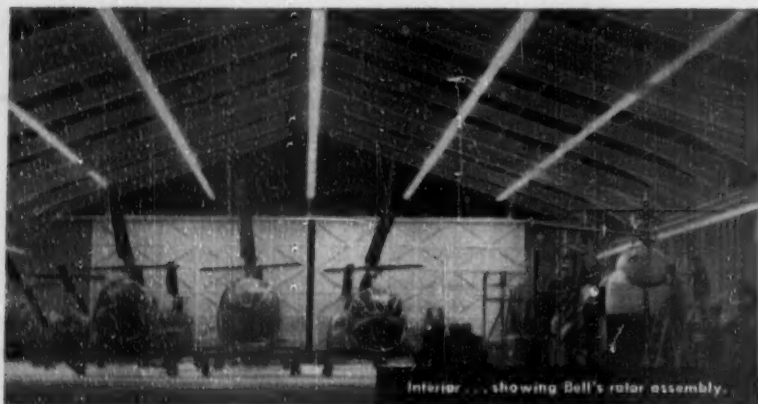


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"... Canada will set aside its plans for an all-Canadian seaway and cooperate with the U.S. ..."

ST. LAWRENCE starts on p. 134

introduced time after time in Congress, and time after time it died there. And Canada, seeing its expenditure in the Welland Canal and elsewhere wasted as long as the 14-ft. bottleneck remained, and growing desperate for a good, cheap power source for its growing Ontario industries, got more and more impatient.

On Sept. 28, 1951, Prime Minister Louis St. Laurent visited President Truman in Washington, told him that Canada was very anxious to go ahead with the seaway on its own if any way could be found to get the power project started. (Canada could not build the power works alone, since the dam had to be international.)

• **Speedup**—What else took place during that conference is not known, but it's fairly easy to reconstruct from what happened afterward. President Truman, also tired of waiting for Congress, told the Prime Minister he would agree to let New York go ahead on the power project—in effect, withdrawing the federal government's claim. But Truman asked first for one more chance to convince Congress.

So one more joint resolution was introduced. It died in the Senate, in the spring of 1952.

After that, things moved ahead quickly. Following some complex diplomacy on both sides of the border, New York emerged last year as the agent of the federal government, empowered to work with the Hydro-Electric Power Commission of Ontario on the job of harnessing the St. Lawrence power. (The two agencies announced this week that construction would start in July.) And Canada announced that it would definitely build the seaway, and would finish it at about the same time as Ontario and New York finished the power project.

At that point, Congress decided that the U.S. should not be left out in the cold. And last month, finally, Congress made its decision official. It passed a bill setting up a government corporation to build the navigation works, as originally planned in the 1941 agreement.

Canada's reaction has been lukewarm. Nevertheless, Canada will set aside its plans for an all-Canadian seaway and cooperate with the U.S.—at least for the time being. If the forthcoming discussions lead to any more prolonged delay, the Dominion is still ready to build the seaway by itself.

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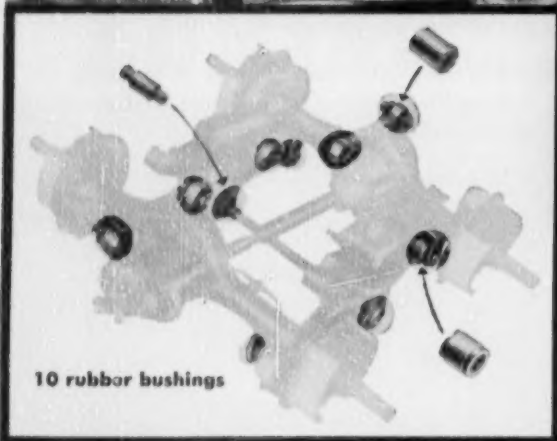


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INTERNATIONAL OUTLOOK

BUSINESS WEEK

JUNE 12, 1954



Things have taken a turn for the worse in Geneva and Indo-China. It looks now as if the Communists are about to win their game.

Here's how the situation looks this week:

- Molotov has killed any chance of an Indo-China settlement except on Communist terms. What he's demanding is practically all of Indo-China—in other words, a complete French capitulation.

- Molotov is leading from military strength. Communist forces in Indo-China are lining up for the capture of Hanoi and Haiphong. And there's little chance the French can hold without strong reinforcements.

- In Paris the Laniel-Bidault government is fighting for its life in the French Assembly. The odds are against this government surviving to strengthen the French hand in Indo-China and rebuff Molotov's near-ultimatum.

- London is sticking to its policy of no military intervention in Vietnam. But that doesn't mean Britain won't agree to joint action to save Laos and Cambodia.

- Washington is shying away from intervention. Unless French policy in Indo-China hardens and Eisenhower gets more support in Congress for military action, the U. S. may adopt a policy of nonintervention.

Molotov became tougher than ever in his speech at Geneva earlier this week. In fact, he reversed his previous diplomatic tactics.

Last week he accepted the idea of a simultaneous cease-fire. Now he's demanding a political solution for all of Indo-China and virtually refusing to talk about a cease-fire. This position is exactly the opposite of the stand the West has taken.

What Molotov is saying amounts to this: Give us all Indo-China and we'll stop fighting. And he means not only Vietnam but Laos and Cambodia as well.

The military situation in Indo-China could hardly be more favorable for Molotov's game.

The initiative today is clearly in the hands of Ho-Chi-Minh.

It's hard to tell exactly how bad the situation is. But Washington takes recent optimistic reports from French sources in Saigon with a grain of salt. U. S. military experts fear that Hanoi and Haiphong might be encircled in a matter of weeks.

Bidault's whole policy is threatened in France as never before.

Last week the French Foreign Minister hoped to satisfy the Assembly by reporting (1) progress in Geneva; and (2) further proof that the U. S. would back France to the hilt in Indo-China.

Now Bidault has had to meet the Assembly with almost empty hands. His only hope is lack of unity among the defeatists in France.

At midweek you couldn't tell whether the opposition would be able to form a government to take over at Geneva. The one alternative to Bidault's policy is submission to Molotov's demands.

British hopes for an Indo-China settlement at Geneva have dimmed considerably.

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

JUNE 12, 1954

Foreign Secretary Eden now has a free hand to meet the new situation. And you can see signs of a tougher line on his part.

Eden already has indicated that Britain will side with the U.S. on Southeast Asia policy if Geneva fails completely. So if Molotov wins his game in Indo-China, there'll be no problem getting the British to help us form a Southeast Asia defense pact in a hurry.

President Eisenhower may have to make a hard decision on Indo-China within a week or two.

It looks less and less as if we would intervene with force in Northern Vietnam. The time for that seems to have passed.

But if the Laniet-Bidault government survives and fights on, we might intervene to save Laos and Cambodia—as a screen to shelter Thailand and Burma. It's even possible that the U.S. will help the French defend a foothold around Saigon in Southern Vietnam.

Any way you look at it, though, the West is taking a beating in Indo-China.

—•—

The West is threatened with a serious situation in Europe, also.

The Adenauer government, which has followed the U.S. line from the start, is facing increasing opposition to its policy of integration with Western Europe. There's strong pressure in West Germany today for a soft line toward Russia.

First it was the Free Democratic members of Adenauer's coalition who started to undermine the Chancellor's pro-Western policy. Now two powerful new voices have been raised against him—Heinrich Brüning, last Chancellor of the Weimar Republic, and Hans Luther, another Weimar Chancellor and the last pre-Hitler Ambassador to the U.S.

These men, who have powerful backing among Ruhr industrialists, are pushing for a neutral unified Germany that would abandon the European Defense Community and German rearmament. This amounts to giving Moscow what it wants in Europe.

If these conservative forces join up with the Social Democrats on this issue, it is hard to see how Adenauer can stay in office.

—•—

President Eisenhower has put the Administration squarely behind the Capehart Bill to reestablish the Export-Import Bank as an independent agency and increase its lending power by \$500-million.

The battle of the bank has raged for a year. The Treasury Dept. wanted to hold down the bank's activities. Many U. S. exporters and a swelling chorus of capital-hungry nations—especially in Latin America—fought for expanded Ex-Im lending.

Pressure for more economic development loans as well as export credits has been mounting. Milton Eisenhower and Sen. Capehart recommended a liberal Ex-Im policy on return from their Latin American surveys.

It's up to Congress now. Capehart believes he has strong bipartisan support for Ex-Im in the Senate, hopes to get the bill passed before the year is out.

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BUSINESS ABROAD



Scores of new filling stations now supply the latest-model car.

Once a barren wasteland, northwest Mexico is transforming itself into a booming agricultural region. Increased use of up-to-date farm machinery plus a new 1,000-mile highway have helped open up the region.



MORE THAN 2-million farm-minded Mexicans have swarmed into the six states that form the rich district—replacing the ferocious Yaqui tribe that once tenanted the region.



Mexico's New

With so little fanfare that few people outside the country are conscious of it, the northwest section of Mexico has quietly worked itself up into an agricultural boom.

Behind this achievement is a story of frontier development that was climaxed this week by the opening of a new 1,000-mile highway stretching from Nogales on the U.S. border, half-way down the Pacific Coast of Mexico to Guadalajara. The new artery opens up an area that once consisted largely of vast expanses of wasteland. Last week, the Mexican Minister of Agriculture said that this year's record crops of corn, wheat, beans, and cotton in the area will wipe out Mexico's deficits in these commodities—made up in the past by large imports from the U.S.

This all bears out the words of a



Granary, the Northwest

former cabinet minister who claimed that: "The real future of Mexico lies in its great northwest. It has the lands that will grow the country's wheat and cotton, and the hard-working people needed to do the job." This prediction is borne out by the fact that today the Mexican northwest is rapidly becoming the country's breadbasket. It's also creating a new market for U.S. manufacturers, especially for makers of farm machinery and autos.

• **New Era**—Until civilization moved in, this area—about 1,500 miles long and 1,000 miles wide—was known as the Yaqui territory. It was named for one of the most ferocious Indian tribes in Mexico, which held unsubdued areas around Ciudad Obregon up until 1929.

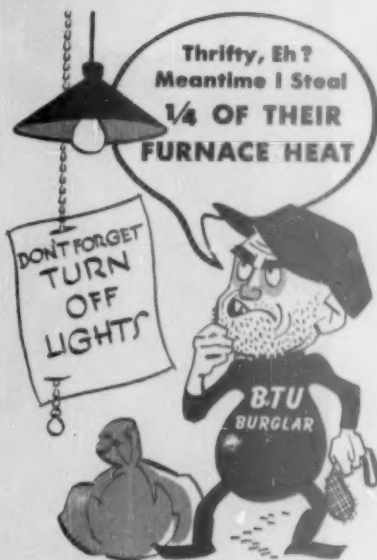
Since then, the Yaquis have been

moved to reservations, while emigrants from other parts of Mexico have poured into the six states that make up the northwest (map).

As a result, the area's population has jumped to more than two million. And as the agricultural boom gains momentum, new cities are springing up out of the once-barren land, and adobe villages are being transformed into new towns fashioned after those in Kansas and the Dakotas. Most of these towns sport wide avenues, ultramodern shops with plate glass fronts, air-conditioned tourist courts, and heavy traffic of latest-model cars.

Hermosillo with a 75,000 population, Ciudad Obregon and Navojua each with 40,000 are the three newest cities.

For a glimpse of what's going on in the area, turn the page.



There are hard ways—and easy ways—to save money. But one of the easiest is to chase the BTU Burglar out of your plant. His thefts there—your needless heat losses—may right now be costing you hundreds of dollars per year in a single furnace.

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THRESHING CREWS move in on the wheat, which is expected to top 550,000 tons this year. Mexico hopes to boost this to 1.2-million tons within two years, when new irrigation projects get into operation.



MAZATLAN, a modern city along highway, recently increased its shipping facilities.

Mexico Gets a Bigger

The current agricultural boom in northwest Mexico is taking place around five of the area's main river systems, and is based chiefly on cotton and wheat. Growth of these crops has been stimulated by a big dam and irrigation construction program that has given the northwest 2.5-million acres of new farmland.

• **Bumper Crops**—The biggest progress made so far centers around the Yaqui River in the state of Sonora. Here a new \$40-million dam and a 30-mile canal system have added about 700,000 acres of fertile land. Annual crop production in the Yaqui valley alone is now running about \$25-million, and will be increased as new projects open up.

In wheat, for example, farmers expect to harvest 550,000 tons this year. The new irrigation projects in Sonora—for

which the government is laying out \$150-million—are expected to boost this output to 1.2-million tons over the next two years.

Sonora also expects to increase its cattle herds. With its current 1.5-million head of cattle, the state is already filling most of Mexico City's meat demands.

In cotton, the northwest expects to harvest 2-million bales—double its output last year. The area hopes to ship most of this to Japan, using the newly rebuilt port of Mazatlan. Up to now, most of northwest Mexico's cotton crop has been sold to U. S. brokers.

• **New Export Field**—Meanwhile, U. S. exporters are moving in right along with the prosperity. The list is headed by farm machinery companies who have helped put many Mexicans into business. That's evident by the large



STUDENTS at University of Sonora in Hermosillo specialize in agriculture.

Breadbasket

(Story starts on page 156)

number of distributors who are now scattered throughout the Mexican northwest.

International Harvester Co. has 12 big distributors in the region. One IH dealer in Hermosillo says he has sold 36 new \$10,000 combines so far this year. Even so, he isn't keeping up with an Oliver Corp. dealer who is offering easier credit terms to local farmers.

Other countries are jumping on the bandwagon, too. Canada's big Cockshutt company is one of the most successful farm equipment manufacturers on the scene. Its machinery now moves over a good part of the new grain fields.

Further indication that the farmers are buying machinery is the fact that they are asking the government to build an 18-in. gasoline pipeline into the



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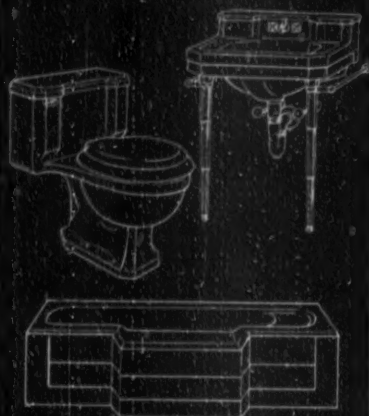
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northwest from the nearest refinery at Salamanca. Tankers are already bringing oil and gas supplies to Mazatlan.

• **Tourist Lane**—Along with helping to open up the northwest, the new highway is helping promote another industry: the tourist business. Built over a period of 20 years at a cost of \$50-million, the road will bring visitors closer to local handicraft industries.

• **More Food, More Mouths**—While the current boom in northwest Mexico will go a long way toward helping the

country's entire economy, there's still a big question: Will the increasing food output of the country's new frontier keep pace with the rising population? It's estimated that at the present growth—one of the world's fastest—Mexico's population will double in 25 years.

The government hopes that the northwest will help solve the problem. It plans to keep the current boom snowballing with a new 10-year development program and a \$500-million outlay.

Trouble Cooking Up for Peron

Argentina, behind a facade of stability, is facing growing unease of labor and management. And there are more rumors of devaluation.

It has been fashionable lately for some businessmen to regard Argentina as perhaps one of the more stable South American nations. The apparent mellowing of President Juan Peron's nationalist policies have kindled hopes of a return to the good old days—when foreign capital reaped a rich harvest in the Argentine market. There's now the possibility of a development deal between Argentina and U.S. oil companies (BW—Jun. 5 '54, p. 132).

But if you look more deeply, events along the River Plate over the past few weeks unsettle even the optimists. There's a pattern of labor trouble, management headaches, rumors of devaluation, and other symptoms of malaise.

At midweek, it looks as if an 18-day strike of Argentine metal workers—which halted everything from ironmongering to typewriter repair—was ending. There were several killings in the closing moments of the strike, and while most of the strikers were ready to return to work, the experience leaves a reserve of bitterness.

• **Boost Pledge**—In other sectors, labor unrest is continuing. Last March Peron, stumping for the Apr. 25 election of a vice-president, indicated that all hands should get a 20% wage increase. Once they'd voted, the workers regarded Peron's speech as a government commitment. When the raises weren't forthcoming, the rank and file of a number of industries began a series of quickie, wildcat strikes. Slowdowns and walk-outs have continued, despite several settlements. The government has mediated some of the wage contracts, but has steadfastly insisted it won't "intervene" in the collective bargaining process.

This goes down hard with Argentine workers—the "shirtless ones" who have been Peron's prime political bulwark and who are used to their wage increases by government decree.

• **Soaring Wages**—Management isn't

happy either. Lack of payroll stability (direct wages have increased 930% in the past 10 years—that plus fringe benefits has upped total costs 15 times) is only one problem. Argentina's acute shortage of foreign exchange has cut the import of needed parts and materials to the barest minimum.

Outside investors with plants in Argentina, some of whom haven't got any profits out of the country since 1947, are grimly holding the fort and trying to make do with worn-out machinery. While many have faith in the long-term future of the country, they cite their present plight as a reminder to any newcomer attracted by Argentina's well-advertised foreign investment law: There's no incentive for new capital, they say, until we old investors are better treated (BW—Feb. 27 '54, p. 138).

Compounding the confusion—and investor hesitancy—are the rumors about a devaluation of the peso—or several of the various "pesos" that go to make up Argentina's multiple exchange rate system. While it's anybody's guess whether or not a devaluation will come (the last time it took nine months of rumors before the ax fell), the talk has been strong enough to cause a run on airline tickets.

It was noised about that airline fares would be converted at 18 pesos to the dollar instead of the present 14, and the companies have been writing twice the volume of international passages for those people who wanted to bet on an increase. A big saving if you have a trip in the future—and no loss if you turn your ticket in for a refund at the end of a year.

• **Devaluation**—Naturally, no Argentine official will talk about devaluation. But outsiders remark that if the peso isn't overvalued, Peron would seem to have discovered an easy road to riches. Since he fixed the value of the peso at 7¢ nearly four years ago, the government

has put 15-billion new pesos into circulation—a 136% monetary inflation. In the first four months of this year, 3.7-billion new pesos have emerged.

A disquieting commentary on the business scene is the fate of the magazine "Esto Es," which recently used official statistics to suggest the state of the Argentine economy. The magazine got itself confiscated by the government for its pains.

Reviewing six years of Argentine business the magazine's editors concluded that the country had "squandered its resources, lived in confusion bordering on disorder." Official figures cited included those recording a 250% increase in bankruptcies, a 12% slump in employment, a 47% drop in retail sales. Actually, the magazine presented the figures in a favorable light. While forced bankruptcies haven't quite tripled, total business failures are up 15 times over the period. And when you adjust for the six-year population increase, employment and sales are down even more.



British Planes for U.S.

Capital Airlines will put British planes on some of its routes next year. It will be the first U.S. airline to use British-made equipment.

Last week, Capital's president J. H. Carmichael (above, right) who returned from a London meeting with officials of Vickers Armstrong Ltd., announced that Capital has placed a \$45-million order for 40 Vickers' Viscount turbo-propeller planes. Three of these airliners will be delivered early in 1954, the rest by 1957.

Carmichael says Capital ordered Viscounts because it couldn't get a four-engine plane in the U.S. that suits its needs. (No U.S. manufacturer is making a four-engine turboprop at present.) And Lockheed's Super-Constellations and Douglas DC-6s and DC-7s—

the big U.S. airliners—are too costly to operate on Capital's medium-range routes, according to Carmichael. Capital couldn't get the same return from them as it expects from the British-made planes.

The Viscount has already proved a money-maker for foreign airlines. British European Airways, whose 20 Viscounts have already flown over 100-million passenger miles, reports that its share of traffic on highly competitive routes has jumped from 28% to near 50% since it put the Viscount into service in April 1953.

Capital's decision to go abroad for new equipment has roused some resentment among U.S. plane makers. Carmichael says, however, that Capital's Viscount order will still bring business to American manufacturers since many parts for the Viscount are made in the U.S. That will be in addition to the already-sizable British purchases in the U.S. Since 1946, Britain has spent over \$80-million here on aircraft and parts.

BUSINESS ABROAD BRIEFS

Costa Rica's plan to buy out United Fruit (BW-Jan.2'54,p56) apparently was settled last week by compromise. United Fruit will put more money into Costa Rica's tills by paying a 30% tax on net earnings. That's double the rate the company is paying now, and will hike Costa Rica's revenue from banana operations to over \$7-million.

Japanese efforts to boost sales in the U.S. will get an assist with this week's opening of a Japan Trade Center in San Francisco. The new office—the first on the West Coast—will display Japanese wares and put prospective U.S. buyers in touch with Japanese companies. A similar center was opened in New York City last April.

India plans to set up a synthetic oil industry with an annual output of 250,000 tons. The move will reduce the country's dependence on imports, which now amount to 4-million tons a year. Construction of the first plant is slated for this year.

The Pictures—Royal Jet, Inc.—82; Cities Service—80; Bob Iscar—164; Herb Kratovil—178, 179, 180, 182; Archie Lieberman—64, 65, 84, 85; Hugh Sidey—92, 93; United Press—114; John Wilhelm—156, 157, 158, 159; D. I. Welt—62; Wide World—27; George Woodruff—Cover, 102; John Zimmerman—30, 31.



The 45 Pound Navigator

• Modern jet aircraft move at such a rate (one would go from Lexington to Concord, Massachusetts, in the time it takes you to read this column) that it is difficult for the pilot to keep track of his location. A few minutes flight off his course and he can be lost. He must constantly check his speed and direction to keep track of his position. In a military plane, a few minutes of dodging enemy action can carry him over completely strange territory.

• A wonderful new instrument (called the AN/ASN-6) which weighs only 45 pounds, is now being built to do this navigational reckoning for the pilot. Regardless of how much he turns and twists the plane, this "ground position indicator" constantly displays the plane's position — and gives the reading in latitude and longitude.

• Developed for the Air Force by the Ford Instrument Company, this new instrument occupies less than 1½ cubic feet, although it has almost 2,000 parts in it. To make it easier to mount in the plane, it is built in four units, connected by cables, so all of it doesn't have to fit into the crowded cockpit. Three of these units are hermetically sealed and are built to outlast the airplane. The fourth unit — the one with electronic parts which might wear out — is designed for easy replacement of parts by sliding them out and plugging new ones in.

• Commercial air lines whose routes are mainly over water and remote from airway beacons have shown a keen interest in this new instrument. And Ford Instrument Company is already hard at work developing even more wonderful advancements on this remarkable new device.

► Each year Ford Instrument Company is adding to its staff of several hundred engineers. If you are an engineer and can qualify, there may be a position for you.



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DIVIDEND NOTICE

The Board of Directors of
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payable June 15, 1954 to
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THE MARKETS

Tuesday's Stock Break: Some Big Losers

	1954 High	Monday Close	Tuesday Close	Tuesday Close Versus 1954 High	Monday Close
Standard & Poor's Industrials	296.83	293.55	286.46	- 3.3%	-2.4%
Standard & Poor's Rails	71.78	70.99	68.99	- 3.9	-2.8
Standard & Poor's Utilities	113.94	113.45	112.13	- 1.6	-1.2
Anaconda Copper	\$38.87	\$37.87	\$36.12	- 7.1	-4.6
Atlantic Coast Line	115.00	112.12	106.50	- 7.4	-5.0
Boeing Airplane	45.00	44.00	41.75	- 7.2	-5.1
Briggs & Stratton	56.50	54.50	50.75	-10.2	-6.9
Cities Service Co.	106.75	105.00	100.75	- 5.6	-4.0
Climax Molybdenum	50.00	48.12	45.87	- 8.3	-4.7
E. I. du Pont de Nemours	128.00	126.25	122.12	- 4.6	-3.3
Ex-Cell-O Corp.	74.50	73.75	70.25	- 5.7	-4.7
General Dynamics	53.50	50.00	47.50	-11.2	-5.0
Homestake Mining	43.75	43.00	40.87	- 6.6	-5.0
Illinois Central	46.45	46.37	44.12	- 5.6	-4.9
Kansas City Southern	50.50	49.00	46.25	- 8.4	-5.6
Master Electric	24.12	24.00	22.00	- 8.8	-8.3
Monsanto Chemical	97.50	92.87	89.00	- 8.7	-4.2
Republic Aviation	34.50	33.75	31.25	- 9.4	-7.4
Republic Steel	59.87	58.37	55.75	- 6.9	-4.5
Revere Copper & Brass	50.00	46.50	44.37	-11.3	-4.6
Texas Gulf Producing	64.87	62.50	59.00	- 9.0	-5.6
Texas Pacific Coal, Oil	47.62	46.75	44.00	- 7.6	-5.9
Youngstown Sheet & Tube	45.00	44.37	42.25	- 6.1	-4.8

Big Board Falls on Its Face

A barrage of selling this week blew the crest off the stock market's eight-and-a-half month rise, clipping \$1 to upward of \$7 a share from even such favorites as the revered blue chips. For the list as a whole it was the sharpest drop since the Korean war broke out in June 1950.

Few market breaks in history have been so well heralded. For months, Wall Street bears have proclaimed that reaction to the steady rise that began last September was overdue.

Nothing happened, though, until Tuesday of this week. Then, early in the second hour of trading, the wave hit. Sell orders came in so fast that at one point the ticker ran four minutes late. Of the 1,243 issues traded that day, over three-fourths ended with declines; at 2,540,000 shares, volume was well above Monday's quiet 1,720,000.

The single Tuesday session wiped \$187-million from the market value of du Pont common. Standard Oil (N. J.) lost \$182-million of paper value, General Motors \$131-million, Westinghouse \$32-million, Santa Fe RR \$20.6-million, Monsanto Chemical \$20-million, Bethlehem Steel \$16.3-million, Union Pacific \$15.6-million, and Good-year \$9.6-million.

From Big Board stock values as a whole, the Tuesday loss was probably

\$3-billion. And there were further declines in early trading Wednesday.

Bulls and bears each had their own ready explanation of the selling wave, despite the absence of any sudden news at home or abroad to turn loose the movement. And both had prophecies of what would come.

The bears smugly remarked that they had predicted a sell-off all along. Their fingers had been pointed at the dizzy heights where scores of top-flight shares had been hovering close to record prices. Just before the Tuesday drop, Standard & Poor's index of 50 industrials was nearly 30% above last September, when the bull market began.

"This is it," said one bear. "We've broken away from the top. There may be a rally, even a sharp one. But prices will not get back up to where they were before Tuesday—not for some time—unless we get into another war. The pace of domestic business since last summer certainly doesn't validate a stock market climb such as has been seen since last autumn."

The bulls for their part were just as certain that the break isn't serious. "Just a normal technical correction," said one. "Even when prices were sliding, there was investment demand for better name stocks. At the most, it's only a little shake-out."

Middle-of-the-roads allowed that maybe bears and bulls were both partly right. They figured that the sell-off was partly due to the speculative interest in the blue chips built up during recent weeks. When the selling started, it touched off many "stop loss" orders

that traders had placed to protect profits. And the touching off of one "stop loss" order generally leads to a rash of them. The cumulation made the break far sharper than it would have been if traders had been less eager to guard their substantial paper profits.

Group Batting Averages—Is This the Peak?

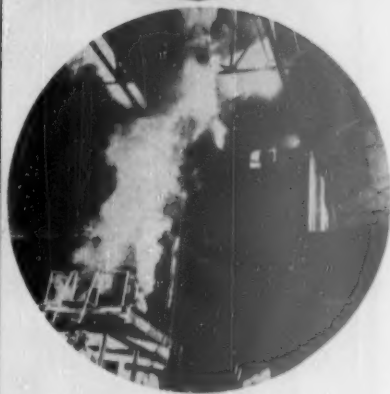
The last week in May saw 29 of 55 groups in Standard & Poor's weekly stock price indexes move into new high ground for the rally.

With the midweek break, however, Wall Street observers were wondering if these may not represent peaks for some time to come.

Stock Group (Indexes: 1935-39 = 100)	1953 High	Start of Rally*	Subsequent High	Recent Level	Rally Gains Maximum	Now
Aircraft manufacturing	229.7	194.2	344.9	344.9	77.6%	77.6%
Electrical equipment	186.2	171.2	289.7	285.9	69.2	67.0
Machine tools	224.6	184.8	304.5	304.5	64.8	64.8
Paper	646.0	584.9	881.7	879.8	50.7	50.4
Office, business equipment	272.7	240.9	371.2	361.4	54.1	50.0
Printing and publishing	130.4	104.1	147.7	147.7	41.9	41.9
Tires and rubber goods	540.6	420.4	599.1	589.0	42.5	40.1
Steel	215.5	174.8	244.9	244.9	40.1	40.1
Finance companies	166.4	138.4	200.1	192.7	44.6	39.2
Shipbuilding	286.1	227.6	313.4	313.4	37.8	37.8
Motion pictures	163.5	139.5	191.8	191.8	37.5	37.5
Metal fabricating	193.5	165.5	227.0	227.0	37.2	37.2
Copper	192.1	137.2	184.9	184.9	34.8	34.8
Oil—integrated companies	300.2	261.8	352.7	352.7	34.7	34.7
Oil—crude producers	716.1	590.6	792.1	792.1	34.1	34.1
Building materials	172.7	151.2	204.7	202.6	35.4	34.0
Auto parts and accessories	181.0	143.0	185.1	185.1	29.4	29.4
Auto trucks	127.3	104.7	135.4	134.8	29.3	28.7
Chemicals	263.1	240.8	307.8	307.8	27.8	27.8
Metal containers	115.7	107.2	139.7	137.0	30.3	27.8
Machinery	185.3	154.3	196.7	196.7	27.6	27.6
Drugs—proprietary, cosmetics	146.1	141.8	181.7	180.0	28.1	26.9
Automobiles	263.1	202.4	255.6	255.6	26.3	26.3
Agricultural machinery	162.3	124.6	155.0	155.0	24.4	24.4
Railroad equipment	110.3	92.0	114.3	114.0	24.2	23.9
Fertilizers	478.3	384.3	471.1	471.1	22.6	22.6
Mining and smelting	137.7	105.9	129.3	129.3	22.1	22.1
Vegetable oil	243.9	163.6	199.4	199.4	21.9	21.9
Natural gas	245.7	218.4	262.3	262.3	20.1	20.1
Utilities—operating companies	140.0	131.6	157.4	157.4	19.6	19.6
Glass containers	131.8	117.0	140.2	139.7	19.8	19.4
Gold mining (U. S.)	65.7	55.3	65.8	65.8	19.0	19.0
Utilities—holding companies	233.2	211.9	251.5	251.5	18.7	18.7
TV, electronics	330.7	260.5	308.6	308.6	18.5	18.5
Food companies	165.5	157.0	181.8	181.8	15.8	15.8
Department stores	267.4	251.5	289.8	289.8	15.2	15.2
Soft drinks	116.0	100.0	118.4	114.9	18.4	14.9
Food chains	291.6	280.8	325.9	322.0	16.1	14.7
Mail order, general chains	258.8	239.7	274.3	274.0	14.4	14.3
Railroads	185.8	153.7	175.3	175.3	14.1	14.1
Drugs—ethical	204.9	161.7	192.8	182.3	19.2	12.7
Distillers	401.9	356.6	408.2	398.4	14.5	11.7
Air transport	361.3	275.9	308.8	305.8	11.9	10.8
Confectionery	128.2	122.5	140.7	134.3	14.9	9.6
Bituminous coal	494.0	354.7	390.4	386.0	10.1	8.8
Textile weavers	267.6	214.5	233.0	233.0	8.6	8.6
Shipping	602.7	490.0	539.1	531.3	10.0	8.4
Lead and zinc	116.3	87.1	94.3	94.3	8.3	8.3
Shoes	126.3	120.5	130.1	130.1	8.0	8.0
Sugar	105.3	84.6	89.5	89.1	5.8	5.3
S&P 100, \$1 chains	128.8	119.1	121.3	115.9	1.8	-2.7
Carpets, rugs	137.7	102.5	103.0	93.0	0.5	-9.3
Rayon	480.3	315.6	315.6	280.9	0.0	-11.0
Leather	192.8	158.6	152.6	140.6	-3.8	-11.4
Tobacco	97.8	92.6	95.7	78.2	3.3	-15.6

Data: Standard & Poor's Weekly Stock Price Indexes
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GM AND FORD UMPIRES Nathan Feinsinger (left) and Harry Shulman operate differently. Ford's umpire can mediate but . . .

The GM Referee Acts as Judge

Next week Nathan Feinsinger, University of Wisconsin law professor and former War Labor Board chairman, takes up his duties as the new \$30,000-a-year umpire between General Motors Corp. and CIO's United Auto Workers.

It's the biggest umpireship in U.S. industrial relations, and in some ways the strangest. That's because GM has its own very strong ideas about the proper role for the labor-management middleman.

• **Contrast**—The GM umpireship that Feinsinger moves into is most often compared with the setup at Ford, which goes by the same name. There, under Yale Law School professor Harry Shulman, a busy umpire's office gets into almost every nook and cranny of Ford's widely ramified relations with UAW. Shulman has been encouraged by both union and company to concern himself with all aspects of Ford's labor policies and with every possible friction point. In this respect, Shulman is fairly representative of the average umpire or impartial chairman operating under a collective bargaining contract.

But that's not the way things work at GM. There it goes by the book: first, by sticking to Webster's definition of an umpire as "one chosen to rule on the plays in a game"—which means the

umpire is not to make the rules; and second, by applying the contract strictly according to the letter.

• **Opposing Views**—It's GM's unalterable stand against a slowly evolving concept of the role that has caused the first change of umpire in more than five years in the GM-UAW setup. GM officials have not budged perceptibly from a position taken years ago: The umpire interprets the contract and nothing more.

This was fine with Gabriel N. Alexander when he took the middleman's role in November 1948, and was still going well with him in 1950 when he said: "My conception of my duties as umpire is to decide cases as presented to me on the basis of the contract." But down through the years, both before and after Alexander took on the trying job at GM, the umpire's role at some neighboring auto companies in Detroit—notably Ford—has been gradually expanded to include some elements of collective bargaining.

Alexander, his associates believe, has found himself through the past few years more and more in sympathy with the Ford system. By last month he apparently was fully converted. He resigned.

• **Mediator or Judge?**—At Ford there

are four umpires, headed by Shulman, who handle a great number of cases and act more as mediators and arbitrators than as judicial umpires. And some students of labor affairs claim that because of Shulman's forceful, persuasive personality and the system he has developed, the company and union are abdicating collective bargaining responsibilities in favor of the umpire.

That has never been true at General Motors, and spokesmen insist it never will be true. GM's philosophy of using an umpire is expressed simply by one company man: "If anybody is going to give away any of GM's rights, it will be GM itself over the bargaining table, and not a third person." As far as GM is concerned, the umpire is not a mediator nor an arbitrator. He is bound by the contract and by precedents.

For the past few years now the GM system has been so successful that the umpire gets only a handful of cases each year. But it was not always so.

I. The Start

The General Motors system was born in suspicion and nurtured on distrust. UAW and GM signed their first contract in 1937, and it wasn't until three years later—when the union became

the exclusive bargaining agent for most of the company's plants—that establishment of an impartial umpire was written into the contract.

Meanwhile wildcat strikes, generally stemming from unsettled grievances, had made the need for an umpire obvious to both company and union. But GM in particular was reluctant to turn over any decision-making powers to a third party. The late Sidney Hillman and Philip Murray were both instrumental in selling the idea of an umpire to GM on the basis of its success in the garment trades.

• **Disputes**—After the umpireship was established, the union was always alert for signs of favoritism. On one occasion, union people refused to meet with the umpire because he had accepted a ride in the company's airplane to arrive at the meeting on time. One umpire was fired by the union (either side can dismiss him) because he ruled in favor of the company on a grievance involving holiday pay.

• **Foundations**—The first three umpires—Harry A. Millis, George W. Taylor and G. Allan Dash—spent most of their efforts in educating both the corporation and the union in the principles of umpireship. Millis was appointed in June 1940 and left the following January to assume the chairmanship of the National Labor Relations Board. He was followed by Taylor, who is called by GM the father of the umpireship. After a year, Taylor went to the National War Labor Board and recommended Dash as his successor.

During his nearly five years in the job, Dash developed a new theory of discipline based on a study made by Dr. George B. Heliker of the University of Michigan. This was a departure from the old idea that the purpose of discipline was to punish. Discipline, according to Dash, should be corrective, rather than punitive, and should be a force leading to the acceptance of reasonable rules.

• **Formal Rules**—When Dash quit the job, in December 1946, the indoctrination period had just about ended. Until that time, the GM umpire had been pioneering every step of the way. The business of umpireship had been carried on in an informal manner.

A new period began with Ralph T. Seward, who succeeded Dash. He inaugurated the formalism that was continued by Saul Wallin and by Alexander, and dominates the umpireship to this day. It was Seward's concept that "it is the limited function of the umpire to interpret and apply the rules which the parties have agreed shall govern their relationship." In other

words, the umpire at GM became from that time on a judge, not a mediator or a counselor.

II. The System

When an employee at General Motors has a grievance, he follows these strictly defined rules. First, he takes it up with his foreman and district committeeman or steward. The grievance then is put into writing. Next, a member of the union shop committee meets with a representative of plant management and attempts to settle the issue. If they can't, the grievance goes up to the "appeal level"—the UAW regional office and a field representative of the company. If not settled at this level, it is submitted to the umpire after screening by the union.

• **Final Union Step**—This screening is done by the union's board of review on umpire appeals, a four-man group established by the international executive board but operating under the direction of John W. Livingstone, director of the GM Dept. and UAW vice-president.

Three members of this group travel about the country examining grievances; the fourth writes the decisions. The group has three choices: drop the grievance, send it back to the local for further clarification, or refer it to the union's GM Dept. for filing with the umpire.

• **Last Chance to Agree**—If the union's GM Dept. gets the grievance, it talks the issue over with the corporation's "umpire staff"—men working not for the umpire, but for the corporation. Here, both sides may attempt to compromise, make concessions to keep the grievance from going to the umpire. This is the last chance for either party to the contract to settle the grievance. When it gets to the umpire, there can be no concessions or offers to settle.

• **Court of Appeals**—The umpire is not informed of any concessions that had been offered to reach a settlement. His job is judicial, and both sides respect that aspect. The presentations are aggressive and uncompromising. There is no aura of collective bargaining, instead a courtroom atmosphere prevails.

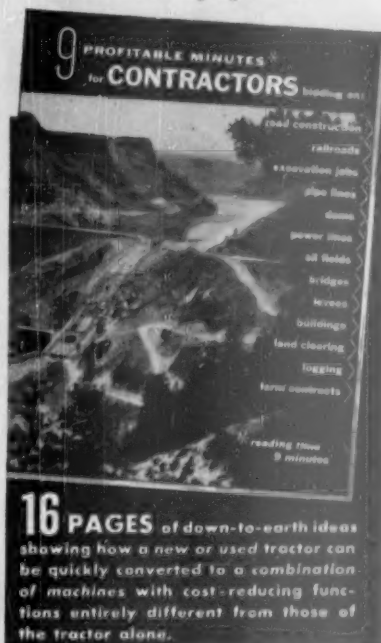
So, in effect, the umpire system as practiced by GM and UAW is really in two parts: (1) collective bargaining at all levels below the umpire; and (2) the cold, formal judicial hearing.

III. The Results

The worth of this system has been proved, at least to the satisfaction of GM officials, by this one statistic:

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Only 1/10 of 1% of grievances filed now reach the umpire. In part, GM's five-year union contract has helped stabilize relations and thus has reduced the umpire's work load—but GM attributes the reduction primarily to collective bargaining below the umpire level, combined with the knowledge of how the umpire has disposed of previous cases.

During four years of the present GM-UAW contract, there have been 22 supplemental agreements. Many of these were to cover disputed points that previously had gone to the umpire for decision. Even in the days of the one-year contracts, the umpire's decisions in one year were sure to be a basis of discussion in the following year's contract.

• **Firm Support**—GM is convinced its concept of the role of an umpire is satisfactory and has strengthened collective bargaining. If the umpire had a broader function than he does, the company feels it would never know where it stood. The union would then submit many more grievances to the umpire in the hope of getting a favorable settlement that might go beyond the contract. It would be a case of "nibble, nibble, little mouse; who is nibbling at my house?"

• **Union Views**—Some UAW people, though, are not quite sure that the GM system is perfect as it stands. When the umpire makes a decision, it becomes a precedent and is thenceforth binding. Some issues that work their way up to the umpire are not worth striking over; neither are they important enough to be brought up at contract reopening or contract renewal times. So the umpire's decision stands—unpopular with the union and a source of constant small irritation.

Still UAW international officers by and large like the GM concept of umpireship. This, in itself, may be one reason why the Ford system is different. One of Walter Reuther's chief centers of opposition is the big Ford Local 600, headed by Carl Stellato. It is almost automatic that anything Reuther favors Stellato will oppose. It's part of the same picture that most of the grumbling in the ranks over the GM umpire system comes from the Flint locals, also unfriendly to the top UAW officers.

• **Which Way?**—However, it is still true that the concept of the umpire as also a mediator is gaining more acceptance in industrial relations. GM believes its way is sounder, and trusts that Feinsinger will continue the umpireship as it has been practiced.

No Raid Pact Signed—But Still Wobbly

AFL and CIO hail pledge against jurisdictional forays, but nonsigning unions are still on the prowl.

The highly publicized, long-delayed no-raiding pact between the American Federation of Labor and Congress of Industrial Organizations is now official. Officers of the two federations exchanged signed pledges of compliance from affiliated unions in Washington ceremonies this week. The atmosphere was cordial and optimistic, but nobody should be lulled into believing that jurisdictional feuding is ended.

• **Limitations**—Inter-union squabbling will be reduced among the unions that signed the pact, but the agreement has these limitations:

• The pledge applies only to unions that sign the agreement. Each binds itself not to raid other participating unions—but remains free to raid nonsigners.

• The agreement covers only situations where workers are already under union contracts. Jurisdictional feuding over who should recruit unorganized groups—long a major cause of inter-union strife—will probably go on as always.

• Many strong locals of internationals that have signed the pact have indicated that they will continue their own past policies on organizing.

This almost certainly will mean pact violations that could have explosive consequences.

• A number of major unions—far more interested in their own growth than in the future of AFL-CIO relations—are holding out against the jurisdictional peace plan. It takes no crystal ball to foresee more raiding, instead of less, on the part of these unions.

These inherent weaknesses lessen the effectiveness and the prestige of the no-raiding plan—and raise a possibility that the agreement might run into serious trouble.

• **No Panacea**—Leaders of AFL and CIO are as aware of this as anybody. Albert J. Hayes, president of the International Assn. of Machinists (AFL), voiced a common view in Washington when he commented that the no-raiding agreement "is not in itself a panacea for all inter-union troubles. . . . We expect that problems will arise . . . but we are confident" they will all be resolved.

The big and immediate problem is, of course, the holdouts: In AFL, the 1.3-million-member Brotherhood of Teamsters and the Brotherhood of Carpenters & Joiners (750,000), along with

some 40 smaller unions; and in CIO, the United Steelworkers (1.2-million) and several smaller unions, including the Marine & Shipbuilding Workers and the Lithographers.

The refusal of the Teamsters to sign the agreement appeared for a time to doom it, since CIO unions look on the Teamsters as AFL's biggest marauder. A few weeks ago, CIO decided to accept a limited pact—leaving the Teamsters and other unions on the outside (BW—May29'54,p118). At signing ceremonies this week, officers of the two federations expressed a confidence that "those who do not now sign will soon see the advantages of accepting the pact."

UAW Gets Report On State of Its Union

The CIO United Auto Workers' annual report to members last week showed substantial growth in 1953 in membership and net worth. However, while the figures were interesting to employers in the auto industry, some of the explanatory comments by UAW's secretary-treasurer Emil Mazey seemed more significant.

The auto union's audit report, required under the Taft-Hartley act, showed a membership that averaged 1,418,117 during 1953, and a net worth of \$20-million—an increase of almost 48% in little more than a year.

In December 1953, UAW reported a membership of 1,327,953—including dues-payers and members on strike. To get membership up to the new high figure, UAW signed up 427,787 new people in 1953, more than five times the net gain for the year—indicating considerable turnover.

UAW income during 1953 was \$22.4-million—including substantial collections for the union's strike fund, which rose during the year to \$8.6-million. Expenditures included \$1.2-million for what UAW calls "competitive shop activity," meaning the organization of nonunion shops.

• **Inadequate**—Despite the "highest net worth in history," according to Mazey, UAW considers the \$20-million total (\$16-million of it in liquid assets) to be "inadequate . . . to maintain our services to members and to give [them] necessary assistance if management should force us into a prolonged struggle [for] a guaranteed annual wage in 1955."

Indicating the seriousness with which UAW regards 1955 negotiations, Mazey called for continuing efforts to "build adequate reserves that will assist us in achieving our 1955 collective bargaining program with the least amount of sacrifice [by] our members."

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He saw the fence, but he didn't stop. With a desperate lunge, he hit it at top speed and partly broke it down. But he caught the ball.

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2.8%

Agreed-on payments for pensions, insurance, severance pay, free food, product discounts, stock-purchase plans, etc.

4.3

8.4

Paid rest and lunch periods, travel, get-ready, and wash-up time

2.3

1.7

Pay for vacations, holidays, sick leave, and other time not worked

5.3

7.8

And profit-sharing, bonus, and other miscellaneous payments, including suggestion-system awards

1.5

3.2

Bringing the employer's total wage cost to

116.9

123.9

Or:

In terms of the average wage dollar, a per-hour fringe cost of

31.8¢

41.3¢

Data: Calculation of the Economic Research Dept., U. S. Chamber of Commerce.

BUSINESS WEEK

ON THE 1954 BARGAINING FRONT:

Employers Eye Extra Cost

Unions' guaranteed wage demands have focused new management attention on the fringe benefits that make labor costs mount (table, above)—the contract extras that were added during the wage stabilization days of World War II and have continued growing.

• **Varying Standards**—Estimates of how much annual-wage plans will cost employers vary according to industry: from 5% of payroll in electrical manufacturing to 7¢ to 10¢ or 12¢ per hour in steel and automotive industries.

But whatever the cost, management circles see no question that such extras are adding a new load to the already heavy costs of payroll.

The Economic Research Dept. of the U. S. Chamber of Commerce surveyed some 900 companies on the non-wage costs of using labor, and issued a preliminary report on its findings—in time for midyear bargaining sessions. Fringe payments of surveyed companies averaged 19.7% of payroll in 1953, or 35.6¢ per payroll hour, according to Chamber statisticians.

The Chamber made a similar check on nonwage costs of labor in 1951. Then, fringes added 18.3% to payroll as compared with 19.5% in 1953. The greatest rise was in pensions and similar benefits generally accepted in union contracts. Pay for time not actually worked (holidays, vacations, sick leaves) also jumped sharply.

• **Jumping Costs**—Fringe costs to manufacturing firms averaged 16.9%; those in nonmanufacturing, 23.9%. Manufacturing employers had higher legally required costs (due mainly to higher workmen's compensation) and higher costs for rest and lunch periods, and for travel, get-ready and wash-up time. Costs of nonmanufacturers were pushed up by larger payments for vacations and other time not worked, and by profit-sharing payments and bonuses.

... in Textiles

In Passaic, N. J., last week an arbitrator's binding award cut the pay of

1,500 employees of Botany Mills, Inc., 9½¢ an hour—and is likely to set a pattern for pay reductions throughout the woolen-worsted industry.

The award, effective this week, cancels a 9½¢ raise won in 1951 by the Textile Workers Union of America (CIO). Since then, the textile workers have had no negotiated pay changes, although a cost-of-living clause has added 5¢ an hour to their paychecks.

• **Industry Changes**—Earlier this year, TWUA negotiated contract renewals, at existing wage rates, with operators of about 100 woolen-worsted mills, representing 90% of the mills under TWUA contract. In the renewals, all operators except Botany agreed not to reopen wage talks unless there should be "some significant change" in industry conditions, even though the pacts specify that "either party may on short notice once a year reopen on wages alone and if no agreement is reached [may] proceed into arbitration."

Botany made clear at the bargaining table that it would sign the contract but would later seek a pay cut by taking advantage of this clause.

• **Pay Fight**—Botany wanted a 16½¢-an-hour pay cut; TWUA said it would fight any reduction at all. The case went to arbitration, and Thomas A. Knowlton of the American Arbitration Assn. decided that pay should be cut 9½¢ because of the industry's poor economic conditions.

While condemning the pay cut, TWUA wasn't entirely displeased with it. A couple of weeks ago, TWUA president Emil Rieve urged the union's woolen-worsted conference to approve cuts of 11½¢ as the basis for settling mill strikes. The conference turned down the proposal.

Shortly after the Botany award was announced, American Woolen Co. and TWUA used it as the basis for settling a strike in eight New England mills. American Woolen had "demanded a 21½¢ cut. In addition to accepting the 9½¢ cut, TWUA agreed, in what it described as "substantial concessions," to cost-reducing changes in the American Woolen contract.

• **Double Edge**—Union spokesmen now say that "the 9½¢ pay cut award undoubtedly will upset deals with mills that have agreed to continue contracts in effect without wage cuts—but it may also help clear up some sticky contract disputes that have been worrying us."

What about worker reaction? "We took the applause," says Rieve, "when we got the raises. Well, we just have to take the abuses now that we're getting a cut."

... in Paper

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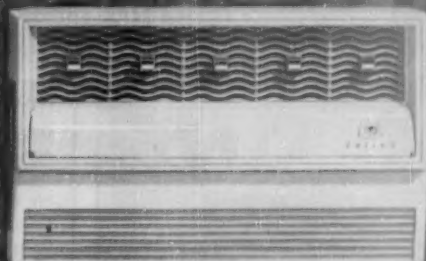
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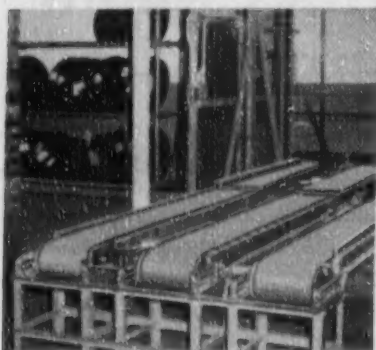
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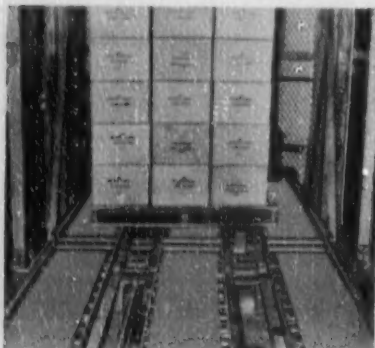
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York signed new wage agreements last week, giving 4,500 workers a straight 5¢-an-hour pay boost. Workers, in six International mills in New York, Pennsylvania, and Maine, are represented by three AFL unions.

. . . in Construction

The Chicago Boiler Manufacturers' Assn., representing 53 construction contractors who employ 1,000 AFL boilermakers, last week negotiated a one-year contract to give workers a 10¢-an-hour pay hike starting July 1. The contract also provided for an employer-paid health and welfare program costing 7½¢ per employee hour.

. . . in Retail Trade

A new three-year, no-strike contract, calling for a 5¢ wage boost for lower-bracket employees and 8½¢ for others, has been signed by five major Pittsburgh furniture stores with Warehouse Local 636 of AFL's Teamsters. The settlement, affecting 400 workers, is similar to one that recently ended a 114-day strike of another Teamsters local against the same stores. The new contracts expire Mar. 15, 1957, and can be reopened twice on wages—with arbitration if settlements can't be reached in bargaining.

Meanwhile, a strike by a third Teamsters local and 10 other AFL unions (BW-Dec.12'53,p50) against five Pittsburgh department stores has entered its seventh month. For the Teamsters local, the big issue is the stores' effort to tighten delivery policies and to reduce costs. The union complains this would result in fewer jobs.

Other unions are seeking higher pay and additional fringe benefits. Stores remain open since CIO unions refuse to honor AFL picket lines and many strikers have returned to work. But sales are down an estimated 25%. Observers credit the drop not only to the store strike but also to bad weather and a transit walkout (BW-Mar.13'54,p168).

. . . in Oil

A 5% increase in pay (slightly over 11¢ an hour) will be sought by the Oil Workers International Union (CIO) in contract negotiations with oil refiners this year.

. . . in Aircraft

Beech Aircraft Corp. and International Assn. of Machinists (AFL) have agreed on a 5¢ wage boost and about

3¢ an hour in additional benefits in a contract reopening. The increase goes to 4,000 workers in plants in Kansas.

. . . in Communications

Western Electric Co. and the Communications Workers of America (CIO) negotiated a new one-year contract giving 5,600 equipment distribution workers in 29 cities pay boosts of 5¢ to 7¢ an hour. CWA representatives of another group of WE employees—17,000 installation men nationally—rejected as "unsatisfactory" a company offer of 4¢ to 6¢ raises; contract talks continued as CWA threatened a strike.

. . . in Shipyards

CIO's Industrial Union of Marine & Shipbuilding Workers has opened negotiations with Bethlehem Steel Co. in New York, demanding a 21¢-an-hour pay hike, a guaranteed wage, and fringe increases similar to those sought by the United Steelworkers (CIO).

The Bethlehem bargaining covers eight East Coast shipyards, employing about 12,000. Bethlehem bargaining usually sets the pattern for settlements with about 30 companies along the seaboard.

LABOR BRIEFS

"A continuing fight" to take over New York docks is planned by AFL, even if it loses the second NLRB election held recently on the waterfront (BW-Jun.5'54,p136). The old, discredited International Longshoremen's Assn., ousted by AFL, led in the vote, but 1,700 challenged ballots must still be acted on. AFL has cut its New York staff, but is keeping its office open.

The Supreme Court (page 29) ruled this week that a union charged with acts or threats of violence can be sued in a state court rather than prosecuted under the Taft-Hartley act. The decision, involving a suit by Laburnum Construction Corp. of Richmond, Va., against the construction workers branch of the United Mine Workers, upholds current NLRB policy—that nothing in T-H takes away the "inherent police power" of states.

Pensions are now being paid by Chrysler Corp. to nearly 2,000 workers who have retired under United Auto Workers (CIO) contracts. UAW reported last week that 2,184 persons have retired at Chrysler in the 41 months the pension plan has been in effect. Payments last year totaled \$857,546.88.



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Take your own processing equipment as an example. A *big* factor in your ability to meet competition's challenge is the job tanks and pressure vessels do. Examine yours. Can you count on them for production that meets the exacting demands of today's markets?

If not, it's time to invest in new equipment. You must have tanks and pressure vessels that withstand the effects of corrosion, assure uninterrupted production . . . that meet your needs for high or low temperature service, or pressure, or cyclical operation . . . that give you fast heat-up and uniform heat transfer . . . modify quickly and easily to take advantage of new techniques. But only the *best* equipment fabrication can assure these advantages. That's why it pays to make use of a *qualified* fabricator's knowledge and resources. Working with your own engineers and consultants *from the start*, he brings the practical experience that means cost-saving suggestions and equipment tailored to your exact processing needs. Why not ask your fabricator's help in sharpening your competitive edge?



LUKENS

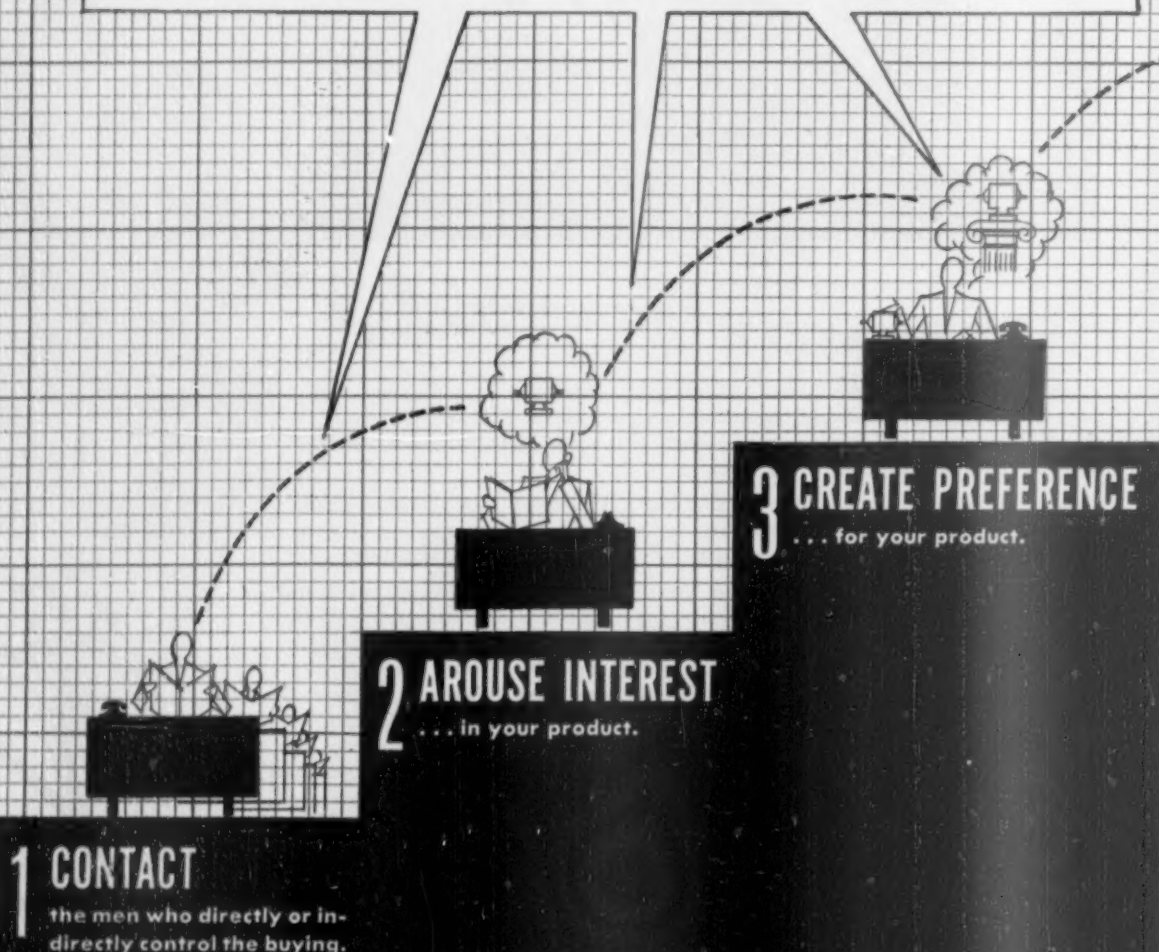
Or, for the names of equipment builders with experience in your field, contact us. Lukens *knows* fabricators from serving as a supplier of quality materials for 144 years. Contact Manager, Marketing Service, Lukens Steel Company, 669 Lukens Building, Coatesville, Pennsylvania.

**Lukens Steel Company, World's Leading Producer of
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Methods Chart for

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Sound and consistent Product Advertising is the best, quickest and cheapest way to accomplish the preliminary steps in building an order.



INCREASING SALES POWER



6 KEEP CUSTOMERS SOLD

... apply advertising to help the salesman hold the line against competition—lay the foundation for future sales.

5 CLOSE THE ORDER

... the pay-off step.

SPECIFIC PROPOSAL

... applying your product to the prospect's problem.

FOR GREATER SALES PRODUCTION... HERE

With ADVERTISING (Mechanized Selling) functioning properly on Steps 1-2-3 the salesman can concentrate more of his valuable selling time on the important job of producing finished orders.

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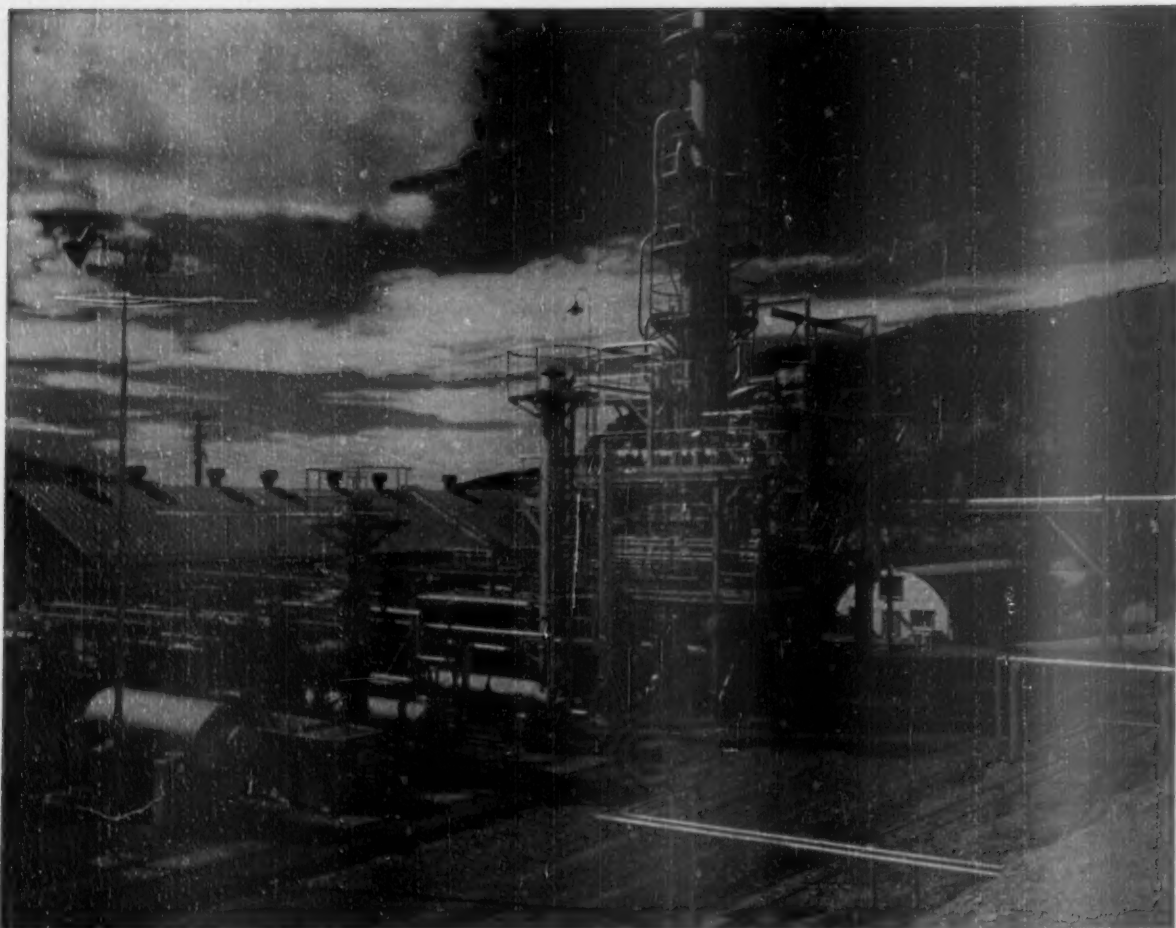
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ABC

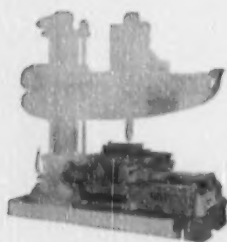
HEADQUARTERS FOR BUSINESS INFORMATION





Oil Shale Demonstration Plant, Rifle, Colorado

Shostal Press Agency Photo

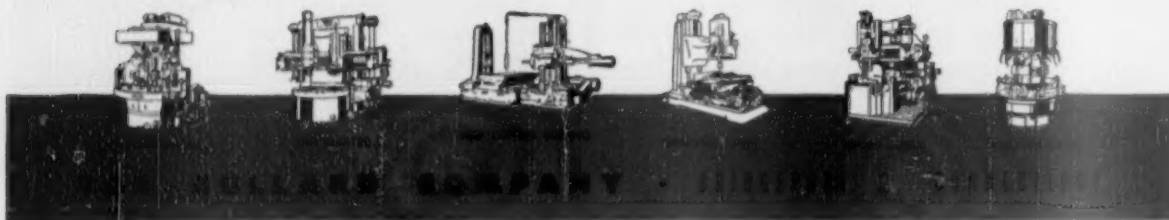


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or tapping

The Invisible Background ... of Industrial Progress ...

In 1850 the bulk of work was done by men and draft animals. Only a little more than six per cent of all the energy used in the United States was used by machines. Lacking good lubricants, the machines available were subject to frequent breakdowns. The discovery of oil in 1859 made possible the development of high-speed steam-driven engines and internal combustion engines. As a result, our use of mechanical energy has multiplied 250 fold in nine and a half decades, and now does 90 per cent of the work in this country.

Modern plants, which produce this vital oil, require equipment which is manufactured with *Modern Machine Tools*—another illustration of "The Invisible Background of Industrial Progress."



PERSONAL BUSINESS

BUSINESS WEEK

JUNE 12, 1954



Chances are that you're not taking full advantage of your safe-deposit box. It's important to give enough thought to things like who should have access to the box and what should be kept in it. Failure to do so can make it almost valueless.

Be sure not to overlook laws governing access to your box by someone else in the event of your death. Such laws can sometimes cause delay for heirs just at a time when speed is necessary.

For example: Often a husband and wife rent a safe-deposit box in their joint names. In some states, when a joint owner dies, the survivor can't open the box without at least a court order. (Sometimes he must have a court-appointed representative of the estate and a representative of the state taxing authorities present.)

This applies even though the box contains only the property of the survivor, and nothing belonging to the decedent.

You can avoid a situation like this in one of two ways:

- Put the box in the name of the person whose property is to be placed in it. Then (if there are two people with interests in it) give the other person a power of attorney, or authority as a deputy, to have access to the box.
- Get two separate smaller boxes—one in the name of each individual. In each case, give the other power of attorney with access. Thus each person can easily get into his own box in the event of the death of the other.

Watch out for misuse of your safe-deposit box; people often deposit property that has neither intrinsic nor sentimental value. This, too, can cause your heirs trouble.

One example is certificates of stock in a corporation that has been dissolved. If the owner of the box dies, such stocks would show up in the inventory of contents that must always be made and furnished to taxing authorities. The estate's representative must then prove that such stocks have no value, so they won't be taxed.

Sometimes that can be tough. The minimum requirement is generally a letter from the secretary of the state of incorporation, stating that the company has been dissolved. Often such information isn't available. Thus proving that an item has no value becomes expensive and time-consuming.

Note, too, that ordinarily you should not keep your will in a safe-deposit box—especially in states requiring a court order to open boxes of deceased persons. It's even more important if the will contains burial instructions.

Best method: Let your lawyer hold the will and other instructions to be carried out in the event of your death. Most will do this without charge.

For the right things, a safe-deposit box can be invaluable. It's wise to keep certain basic papers there—family records (birth, marriage, and death certificates), citizenship papers, passports, Social Security records.

These are helpful to dependents. In case of the deposit-box owner's death, they are valuable in establishing rights to collect life-insurance proceeds, Social Security and pension benefits, and the like.

In addition, keep in the box evidences of your right to receive income.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

JUNE 12, 1954

That would include life-insurance policies, and compensation agreements—especially deferred compensation agreements.

The same thing is true of evidence of ownership of property. It's a good idea to keep an inventory of your property in the box, along with stocks, bonds, mortgages, notes, leases, and deeds.

In this connection, remember that federal income tax laws as well as some state laws permit you to deduct the rental cost of a safe-deposit box—in which you keep income-producing securities. By the same token, you cannot deduct that cost if the box is used for storing jewelry and other personal effects.

If you're going to Europe, consider signing up with a charge-account plan. It has two big advantages for the foreign traveler: (1) You don't have to carry and exchange large amounts of money; and (2) it's a convenience if you suddenly should be called upon to entertain friends or clients.

Latest such plan is Travelers Credit Service, Inc., which provides a personal charge arrangement at 250 clubs, restaurants, shops, and car-hire companies in 14 European countries. It claims that its list includes only the best shops and restaurants.

For a membership fee of \$15, you get a credit card in a leather case with room for your Travelers Service directory and passport. In Europe, your bills are stamped (to avoid additions) and presented for your signature.

The service audits all bills to safeguard against overcharging, sends you an itemized account when you get home.

Note that this automatically gives you income-tax and expense-account records. (If you want full details, the service will forward photostats of individual bills you have run up.)

Travelers Credit Service has U. S. offices at 11 East 44th St., New York 17, N. Y.

RCA-Victor is issuing a series of a new type of operatic record. Called *Arias Sung and Acted*, it consists of several arias first spoken by a famous actor, then sung by a famous opera star.

Before your kids leave for camp, make sure you have bought the amount and quality of equipment recommended by the camp. It won't do any harm to buy a little more—usually the camp gives you a minimum figure.

The outfitting bill is expensive—average price is \$150, sometimes goes as high as \$250. That's because camp clothes and equipment have to be extra sturdy and durable.

As an executive, you spend more money keeping your hat than you did buying it.

That's the estimate of James M. Vicary, market research company. In one year, says the company, the average businessman pays about five times the original price of his hat in tips to hatcheck girls.



"That's a load off our shoulders!"

*say dockmen about U. S. Rubber **H-1515** hose*

Handling conventional oil-dock hose is not a job for weaklings. The hose is bulky, heavy, stiff—difficult to handle and hoist. United States Rubber Company engineers thought this was doing it the hard way. They came up with U.S. Amazon® Hose H-1515—2/3 lighter in weight, highly flexible. That's why dock workers are cheering.

Executives of oil companies, barge and towing lines are cheering, too, but for additional reasons. U.S. Amazon H-1515 is so easy to handle that it sharply reduces make-up time to the header. Its light weight and ease of handling have sharply

reduced accidents. As for durability, U. S. Amazon, despite its light weight, can take rough treatment without damage.

This hose makes all other oil-dock hose obsolete. It has been thoroughly proven by four years of Navy service, and three years of oil company service. It is now used by every major oil company in America and most foreign countries. H-1515 Dock Hose is made only by United States Rubber Company and sold through any of the 27 "U. S." District Sales Offices. Further information is obtainable by writing to address below.

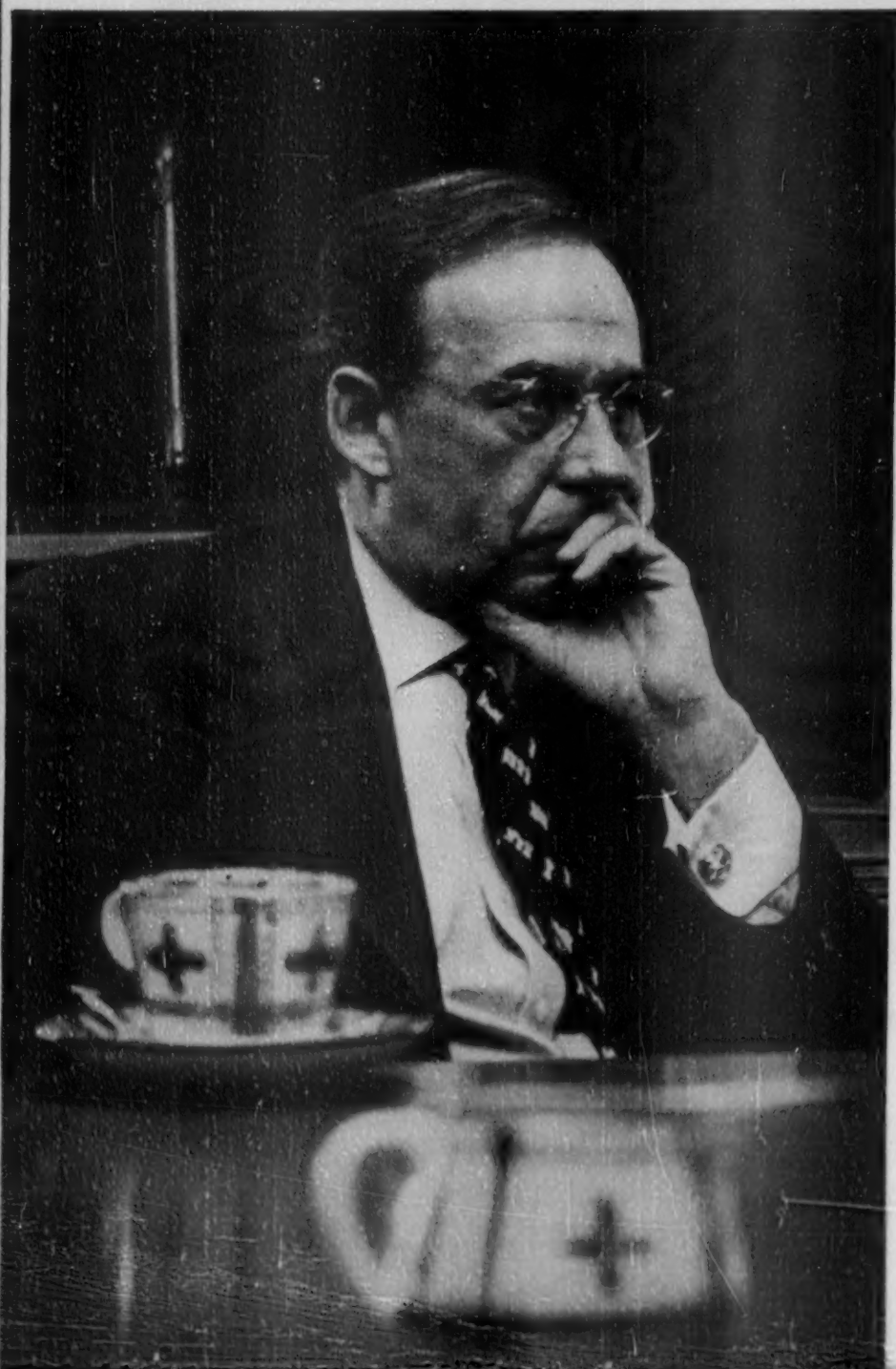


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NAMES & FACES



NORTH



A PUSHOVER for a Boy Scout deed, Edgar Kaiser is developing into a . . .

He's Being

Moving vans in the driveway of a house in Ann Arbor, Mich., last month signaled the changing of the guard of an industrial empire. The Edgar F. Kaiser family was going home to California.

By no admission of anyone concerned is Edgar's father, Henry J. Kaiser, putting aside direction of the billion-dollar business complex he has fitted together over the past 40 years. Edgar Kaiser says he himself intends to continue spending more than half his time in Toledo as president of Kaiser Motors Corp. and its wholly owned Willys Motors, Inc. (BW—May 8'54,p86).

But slowly, as a sunburned man eases into a starched shirt, Edgar Kaiser is donning his father's mantle. If he weren't, his family would not be moving 2,000 miles from Toledo.

• **Training Executives**—To Edgar Kaiser, not even a deep sense of personal obligation to more than 100,000 employees and stockholders transcends upbringing his children. Edgar himself is very conscious of the fact that he is the second generation of a company.



HARD-HEADED businessman. Above, Kaiser (right, in front of window) discusses termination of a distributor-dealer agreement with Laurel C. Worman (directly opposite).

ngtted for the Kaiser Ermine

Hawaii, and a score of places in between. He simply takes the family with him.

"I took all six kids into a meeting of the First Boston Corp. in New York one day," he recalls. "The men didn't know what to make of it, but the kids got a big kick out of it."

• **The Field**—The Henry J. Kaiser Co. controls companies producing aluminum, steel, cement, sand and gravel, gypsum, chemicals, metal products, aircraft subassemblies, and automobiles. And holding the controlling stock in the Henry J. Kaiser Co. are an aging but still energetic father and his two sons. (There are five nonfamily stockholders.)

On his 72nd birthday last month, Henry J. Kaiser was in Hawaii, mulling over a plan to build a hotel, and phoning his lieutenants in Oakland, Calif., new ideas to increase the sales of aluminum foil in the islands. But more than any of his numerous, other interests, his medical foundation hospitals and health plan dominate his thoughts today.

His youngest son, Henry, Jr., 36, through a multi-step process, is

Sr., Edgar, and his boyhood friend and college classmate, E. F. Trefethen, Jr. Edgar Kaiser is a "team" man who has surrounded himself with a crack crew of production, legal, financial, and merchandise experts. Nevertheless, even in an organization as loosely knit as the Kaisers', there comes a time when one man takes the final responsibility.

As Henry, Sr., grows older, it becomes plainer that in the future that man will be Edgar Fosburgh Kaiser, 46 years old next month.

The responsibility includes 116 establishments in 15 states and 14 countries, the nation's third largest aluminum company, the twelfth largest steel company, a cement plant with the second largest capacity in the world, an engineering service that has master-minded construction worth \$2.5-billion.

Even his auto company, which Detroit sophisticates pretend isn't there, is the nation's third largest exporter of vehicles.

• **Captain**—The man heading such a conglomerate industrial array is automatically important to the 65,700



new capital without new stockholders!!

IT CAN BE a heartbreaking situation when, after years of work and loyal support by original stockholders, a company must find working capital by taking in new stockholders. Family or individual holdings are diluted, control can be shifted and even the company's ability to obtain necessary credit reduced.

HELLER COMMERCIAL FINANCING programs have been the answer for many businesses faced with the problem of inadequate operating funds. You use our funds to meet your requirements without having to meet maturities—in effect, as capital. Heller commercial financing fills the void without exercising control over management or participation in profits.

THE CONVENIENCE and adaptability of our services is recognized nationally as we supply in excess of \$500,000,000 annually to industry.

TO LEARN THE FACTS about this unusual service, write for a free copy of our brochure *Operating Dollars for Every Business*. You are also invited to consult us, by letter or in person, about specific financial problems. There's no obligation.

Walter E. Heller & Company

NAMES & FACES



EDGAR F. KAISER, the man who will one day don the mantle of his aging father, Henry J. Kaiser, started to prepare for the job at the age of 12.



A PUSHOVER for a Boy Scout deed, Edgar Kaiser is developing into a . . .

He's Being Fit

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• **Training Executives**—To Edgar Kaiser, not even a deep sense of personal obligation to more than 100,000 employees and stockholders transcends upbringing his children. Edgar himself is very conscious of the fact that he is the second generation of a comparatively young empire. He believes that training the third generation to take over the reins is just as important a job as running his hydra-headed enterprises. He has solved the problem of keeping close tabs on the education of his children even while giving personal attention to business in Toledo, New York, Washington, California,



HARD-HEADED businessman. Above, Kaiser (right, in front of window) discusses termination of a distributor-dealer agreement with Laurel C. Worman (directly opposite).

g Fitted for the Kaiser Ermine

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His youngest son, Henry, Jr., 36, although a multiple sclerosis victim, is a vice-president and top boss of public relations. While he has a brilliant mind and a strong voice in company policy, he is unable to do the traveling the scattered Kaiser enterprises demand.

• **The Team**—Day-to-day management is directed by a triumvirate of Henry,

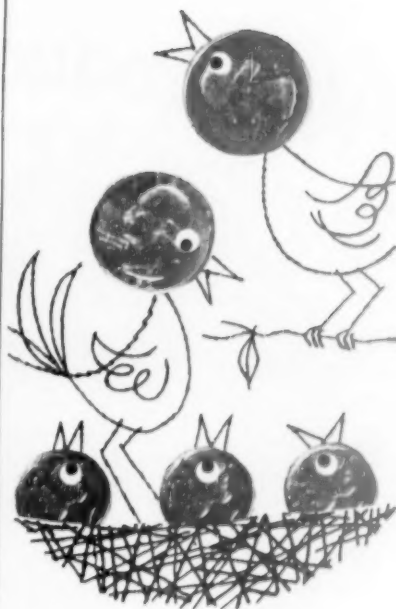
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Even his auto company, which Detroit sophisticates pretend isn't there, is the nation's third largest exporter of vehicles.

• **Captain**—The man heading such a conglomerate industrial array is automatically important to the 65,500 people it employs, the suppliers from whom it buys half a billion dollars worth of goods each year, the buyers of its nearly \$1-billion worth of products, the civic and political leaders within its domains. And because he is important, what he thinks and how he thinks, what he believes and why he



new capital without new stockholders!!

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Cincinnati 12, Ohio



KAISER wants his family with him all the time. On trips, he is usually accompanied by one—or all six—of his children.

believes, automatically become important.

I. The Family Man

One night not long ago, the Kaisers had business friends for dinner in their Ann Arbor home, but the main conversational piece concerned a family problem.

Edgar had a speaking engagement two nights later in Toledo at the annual Junior Achievement banquet. That same night his son, Edgar, Jr., was to be in a school swimming meet. Mrs. Kaiser outlined the plans: She would catch the first part of the swimming meet, then fly down to Toledo to hear her husband.

Edgar, Sr., pondered, then reminded his wife: "This is an important thing to the boy, Sue. I talked it over with him and explained why I couldn't be with him because I made this engagement and had to keep my word. But one of us ought to be with him in case he is in the finals."

Mrs. Kaiser stayed through the meet (Edgar, Jr., won). Then she and two of the boys, Edgar, Jr., and Henry, 9, went to Toledo, met Edgar after his speech, and the family flew to New York where Kaiser had business conferences the next day.

• **Full-Time Parent**—Edgar Kaiser sees nothing odd in cutting his family into his business travels. That's the way he himself was brought up. Since he was 12, he worked and traveled with his father. "We were a close-knit family," he says. "You've heard about people being inseparable. Well, my mother and father were—literally. He wanted us with him all the time."

Edgar wants his family with him. His income and the Kaiser industries' fleet of planes make it possible. But

D. V. Robbins
Schenectady, N. Y.

F. L. Jory
Chicago, Ill.

W. A. Reynolds, Jr.
Baltimore, Md.

T. E. Grace
Manhattan, N. Y.

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G. W. Appar
Granby, Mass.



T. K. Schuyler
Green Bay, Wisc.

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3. Instructs your maintenance crew, offers mechanized equipment, or recommends a reliable contractor.

The Tremco Man's services are available without obligation.

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solve problems involving

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PAINTING 

SASH 

FLOORS 

WATER REPELLENCE 



Alcoa Building, Pittsburgh, Pa.

Harrison & Abramowitz, Architects

not 10%, Mr. Zeckendorf! 2% is plenty!

We agree with Mr. Zeckendorf that it's worth 10% of a job to achieve the distinction that enables the initial 90% to sell itself.* But if you can get the effect with less than 2% why spend more? The thousands of feet of beautiful marble used in the Alcoa Building in Pittsburgh actually cost only 1.7% of the total construction cost.

And that is the story of marble. It does two big things for every construction job, whether it's new building or remodeling. *First*, it sells the job, as no other material can: sells it to the owner, to the tenants, to the public. *Second*, it completes the job, in beauty, with economy, and for long years of low-cost service.

Literature Available FREE

- "Proof that Marble Costs less . . ."
- "Marble Forecast, 1953-1954"
- "Marble in the Bank"



*As discussed in Architectural Forum, June, 1953, pg 151
by William Zeckendorf, Pres., Webb & Knapp, Realtors.



KAISER'S DOOR is always open. His staff drifts in and out all day long.

his prosaic acceptance of the responsibilities of family life give the impression he would manage it without the resources his business puts at his disposal. The Kaiser children are being raised without the trappings of wealth or position. Unostentatiously, but pointedly, Edgar mentions that his boys attend public schools. The younger girls, Becky Ann, 18, and Gretchen, 15, have been in private schools; but this fall Becky will go on to Stanford University, while Gretchen will enter public school when the family returns to Oakland. One other daughter, Carolyn, 20, was married in April to Raymond D. Wehle.

• **Fire and Slippers**—Kaiser appreciates but cannot understand men who prefer night clubs, golf courses, and other recreational spots to office or home. The family takes little part in the social activities of the communities where they live—which has drawn mild charges of snobbery from other residents.

Edgar is aware of this feeling, but has no intention of trying to overcome it. When he wants to relax, he goes to a summer home on Orcas Island in Puget Sound—with his family. He fishes a little, navigates a twin-engined cruiser around the sound, and is never really happy unless he has to work on the engines.

II. The Executive

Edgar Kaiser was trained by his father to inherit wealth. He was also trained to inherit the accompanying responsibilities. Both angles of his education were forged by clanking, puffing, whirling machines; he was raised in the environment of big men and big machines. From that background came Edgar Kaiser's informal, questioning type of executive philosophy.

• **Early Start**—Kaiser was born in Spokane, Wash. When he was 12 years

old, he carried water on one of his father's construction jobs during the summer vacation. The following year he was a messenger boy handing material slips up to truck drivers. He slipped under a wheel, and his left ankle was so badly crushed he had five operations and used crutches for more than three years.

At the University of California, majoring in economics and business administration, he was within a few months of graduation when he had an opportunity to be a superintendent on a pipeline job his father had in Kansas. "My father and I talked it over and we agreed I had learned as much as I could in school—missing the last two months wouldn't hurt. I intended to go back the following year for my degree." The following year he was project manager on a \$1-million pipeline job in Montana. He never went back to school.

He worked in the sand and gravel pits and at Boulder Dam. A concrete bucket fell on the same foot previously injured and he went back to the hospital and to crutches. He couldn't work on construction, so he went to Washington as the West Coast construction industry's representative on the NRA codes.

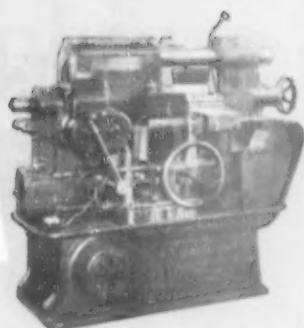
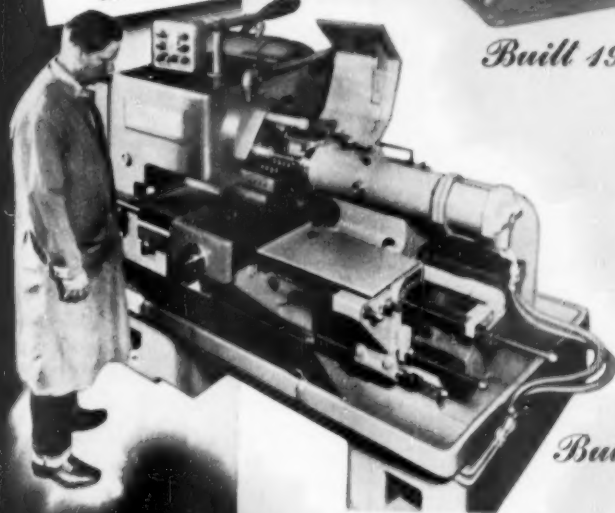
At 27, Kaiser was boss of the "Six Companies" work on the Bonneville Dam. He moved on to Grand Coulee, then into the cement plant, ran the shipyards during World War II, negotiated the government agreements that put the Kaisers in the steel business. At this point, Edgar Kaiser was a familiar figure around Washington and it once was reported that a government official told Henry to stay away; he preferred to deal with his son.

• **Into Autos**—When the war ended, the Kaiser people studied several industries to replace shipbuilding. At first, Edgar decided on air cargo. "Then I realized it would not be big enough to take care of my shipbuilding people." About that time, Joseph W. Frazer sold Henry Kaiser the idea of a joint automobile venture.

Kaiser-Frazer ran into trouble right at the start. Tooling was slow, materials were scarce. Henry sent Edgar to the East to straighten things out, and in December 1945, joined him. Riding from the airport, Frazer asked Edgar to stay and be his general manager. "I didn't want to," Edgar says. "My family was on the coast. But I asked my father 'Do you want me to do it?' He said, 'I really do.'"

Kaiser says that they greatly underestimated the difficulties in the automobile business. He doesn't know—in the light of what he's learned—whether the Kaisers would make the same decision today they made in 1945. "My father's timing was excellent," he says.

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"Engineered Production"
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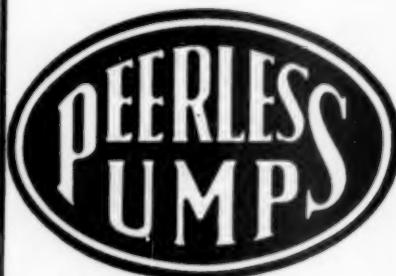
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"the execution was good. But we made mistakes."

• **Move to Specialize**—He isn't ready to concede that the new Kaiser-Willys setup cannot be profitable. "We're still located at the same address and still doing business. I am convinced we shouldn't be competitive with the Big Three. We have got to specialize."

Through specialization—now the Jeep, perhaps something different later on—he hopes to restore profitability. If specialization doesn't work, Edgar Kaiser will merge Kaiser Motors or liquidate for any or all of three reasons: (1) to protect the employees' jobs; (2) to protect the community; or (3) to protect the stockholders' equity—the Henry J. Kaiser Co. is only a minor stockholder, but a large creditor.

Protection of the Kaiser family's investment is never the overriding consideration with Edgar Kaiser, even though all of the Kaisers' personal fortunes are tied up in their companies. "We don't own any outside stock," says Edgar. "My father believes we should put the money back into the business." More important to Edgar than financial standing is the welfare of people. He likes and respects people as individuals. And, as he did on pipelines and in shipyards, he operates his business on that simple basis.

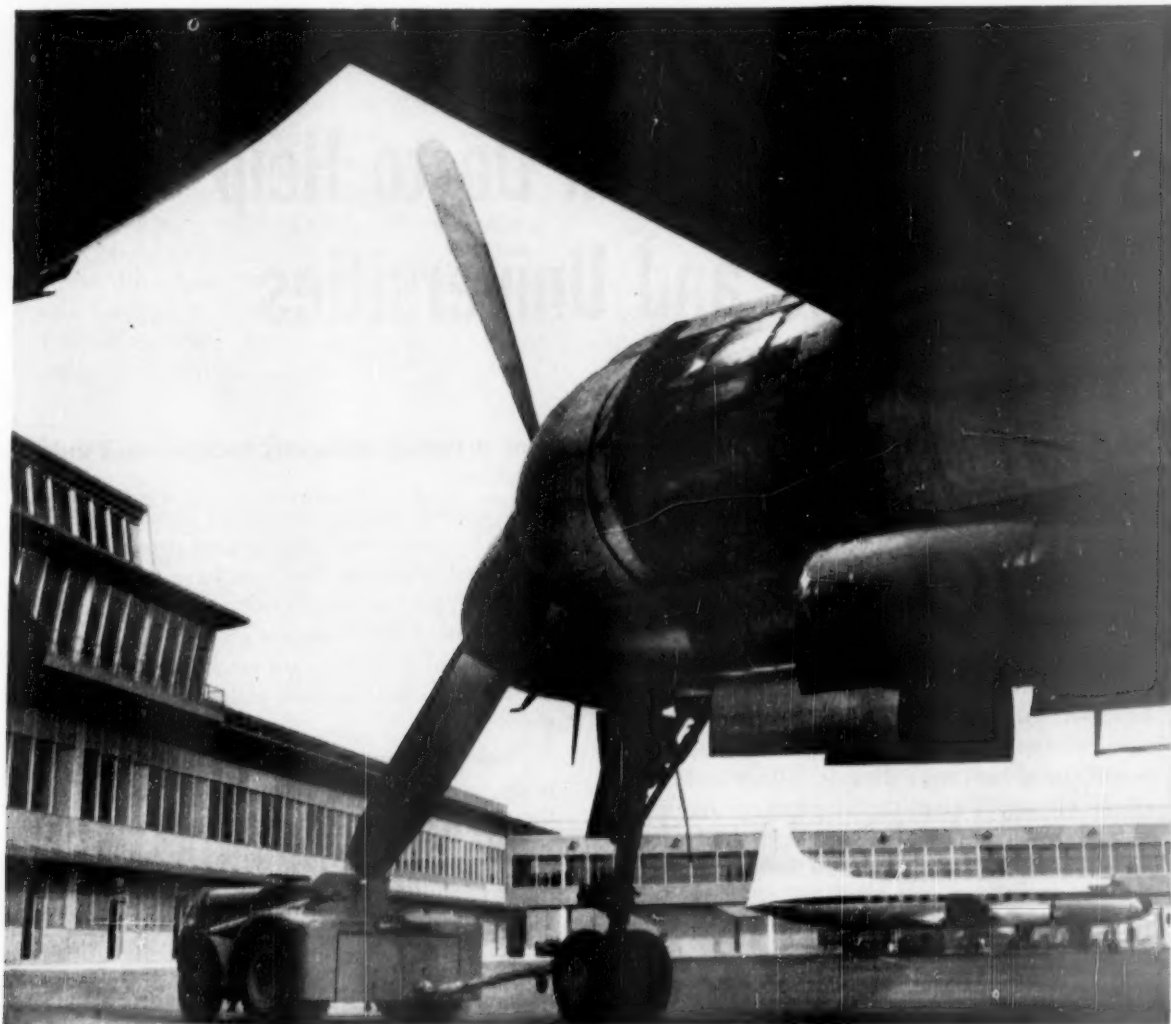
• **Joint Responsibility**—Kaiser is a pusher, rather than a leader. He refuses to close his office door, and his staff drifts in and out with problems or information all day long. Or, hands in pockets, shoulders hunched, Kaiser may plod in and out of the executive offices in the Willys building to find out what's going on. He listens, questions, but seldom decides a matter alone. "It's your ball," he'll say. "Go back and run it." Or, "I think you're well-equipped to handle it."

This attitude, too, is a reflection of his father. The Kaiser interests are tied together with planes and telephones, and the telephone has the edge. Henry and Edgar are on the phone several times a week; and Edgar talks almost daily with Gene Trefethen, no matter where each man happens to be. And Henry, says his son, is a needler. He wants Edgar to make decisions and act on them—a principle Edgar tries faithfully to follow with his own people.

• **Disciples**—This confidence in his staff draws to Edgar Kaiser key people who apparently are more disciples than employees. According to his close associates, he has a personal charm that defies description and defies resistance. People leave him, but they generally come back.

There is the case of one man in the former Willys organization who used to see the president perhaps twice a year, and quaked at each summons. He sees Edgar Kaiser once a week and says, "I

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FINANCIAL AID TO HIGHER EDUCATION

What Business Can Do to Help Our Colleges and Universities

Is the financial squeeze now gripping our colleges and universities grave enough to warrant direct action by the business community? If so, what can business do about it? This editorial is addressed to these two questions.

In the previous editorial in this series of two, it was demonstrated that **our colleges and universities, and particularly the independent institutions, face financial difficulties, which, unless relieved, promise to get progressively worse and might ultimately result in a national disaster.** This state of affairs obviously gives the business community a crucial stake in helping to relieve the plight of these institutions. For our business organizations can be no stronger than the total community of which they are a part.

It does not follow automatically, however, that every business firm should give direct financial aid to education. Already the business structure is heavily burdened with activities unrelated to its main purpose. These include acting as tax collector for more than \$65 billion of federal, state and local taxes in the year 1953. There is a limit to the amount of such public enterprise that can be loaded on the business system.

Business Holds Key to Answer

If, however, the survival of a key part of our educational system depends on its having financial help from the business community, that help should be provided. And this is the situation of our indepen-

dent privately endowed colleges and universities.

Of course, our tax-supported institutions of higher learning must also be kept strong, financially and otherwise. But they have recourse to public support not available to the independent institutions. Largely on this account, their present financial difficulties are much less acute than those of the independent colleges and universities.

These independent institutions have seen price inflation eat away much of the value of their endowments. Moreover, there is no prospect that these endowments can be sufficiently replenished by gifts from the wealthy people who provided them in earlier years. Progressive income and estate taxes have seen to that. Thus, they are faced not only with a peculiarly acute financial problem, but also one which cannot be solved except by tapping other sources of aid.

Tax Support No Solution

It is conceivable that the independent colleges and universities might solve their financial problem by seeking support from tax revenues. If they did this, however, they would lose their distinctive character as independent institutions, and our system of higher education would lose one of its major elements of strength. That is the existence in our educational system of both independently financed and tax-supported colleges and universities. Each has its special contribution to make to a well-balanced system of higher education.

Business is directly dependent upon higher education to staff its increasingly complex and exacting operations. A key part in this process is played by the small, independent liberal arts colleges which are the hardest hit financially of all our institutions of higher learning. "These," states the Council for Financial Aid to Education, recently formed by a group of business leaders, "have contributed a high proportion of the intellectual, scientific and religious, as well as business leadership of the nation. Their programs are devoted to the teaching of values, particularly the values of freedom. They are a vital bulwark to our system of free enterprise."

Means of Providing Help

There are many means by which business firms can extend help to our colleges and universities. The most obvious, of course, is to make outright grants of money either to individual institutions or to groups of institutions for such uses as the institutions think best. Another means of help, increasingly employed by business firms, is to establish scholarships to pay the full cost of college or university courses of study. Sometimes the scholarships are open for general competition, sometimes they are limited to employees and children of employees of the firm granting them. Not infrequently those winning the scholarships spend some part of their school vacations working in the companies granting the scholarships.

A number of companies have recently provided for what have come to be called "scholarships in reverse." These companies pay a flat sum to a college or university for every one of its graduates they employ. Financing of university research programs also offers a broad avenue for financial aid to our universities by business.

Need Two-Way Communication

Some business firms have well-developed programs for financial aid to education. But they are exceptional. For most companies the problems involved are new and strange. These companies were created with the basic purpose to make money, not to give it away. Successful philanthropic operations involve a whole set of

problems with which they have very little experience. Not the least of these is how to make business a dependable source of financial aid to education, since business has no assurance that the profits of one year will not be losses the next.

Considerations such as these emphasize the wisdom of a recent Industry-College Conference on aid to higher education by business, in making the first of its ten conclusions that "better communication, by direct contact, is needed for each [industry and the colleges] to understand the problems of the other." At this juncture the creation of mutual understanding is much more important than the raising of some money and letting it go at that. The problem of aid to education by business has its immediate urgency, but there is also a long-range program to be developed on which business and the colleges and universities must pull together in the years ahead to find a satisfactory solution.

As stated at the outset, failure to find a satisfactory solution could result in a national disaster. This means that, **to give proper heed to their own future prosperity and the future welfare of the nation, business firms generally must go to work on the problem of financial aid to higher education. They must go to work first, to understand the problem; second, to establish two-way communication with our colleges and universities about it; and third, to develop a program which pays proper heed to the needs and capabilities of both business and higher education.**

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look forward to going upstairs because I know whatever it is will be interesting and stimulating."

III. The Person

There are four books on Edgar Kaiser's desk in a large corner office on the fifth floor of the Willys building: The Collected Poems of Nick Kenny, Bartlett's Familiar Quotations, The Webster Collegiate Dictionary, and The Holy Bible.

The poetry and scripture are not mere ornaments. Edgar Kaiser's faith is in God and in man's ability to create and thrive and progress within the framework of the Beatitudes. He inherited a love of poetry from his father. And the poems he reads and carries on cards in his pocket ballyhoo man's moral fiber, man's building, and the wholesomeness and eternity of nature.

• **More Realistic**—His faith and ideals lead him into business booby-traps, which he uncomplainingly accepts as a penalty of his beliefs. He bought Willys without ever seeing the cost breakdowns because "if we decided not to buy, then we would have known all their secrets. It wouldn't have been fair."

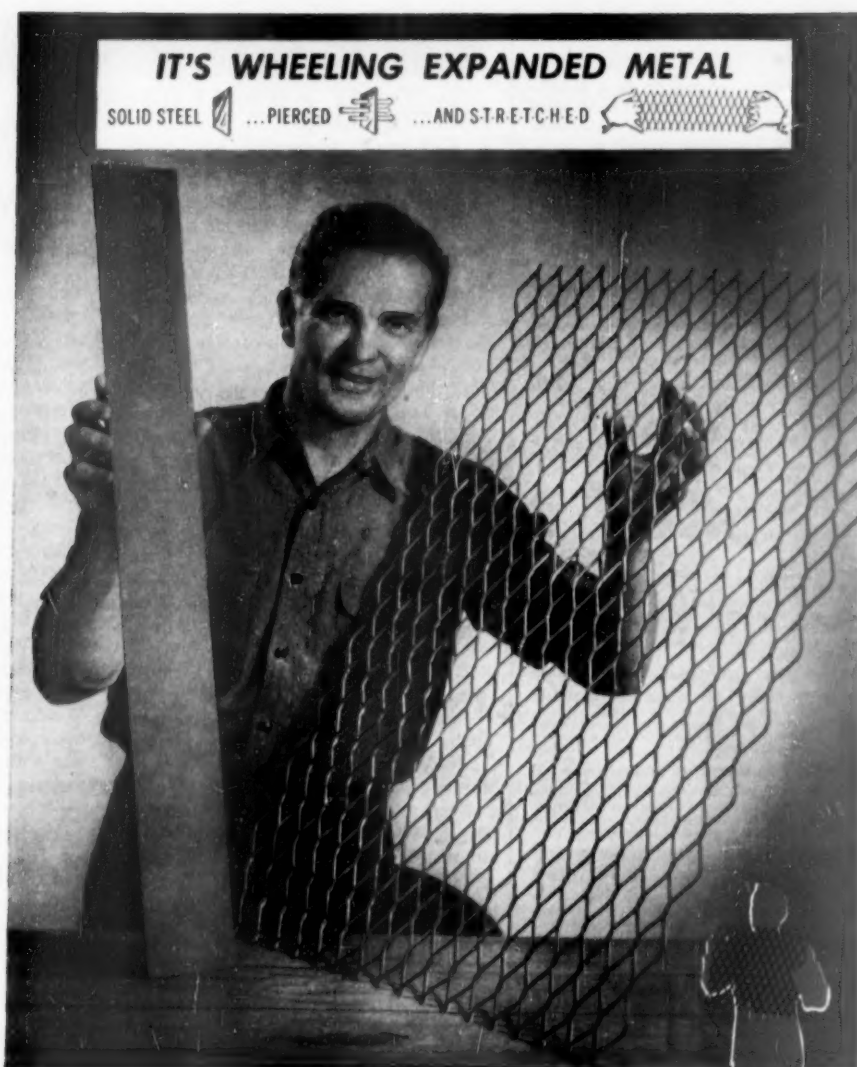
However, Kaiser doesn't always play Little Red Riding Hood to the wolf. He is more realistic now than before his auto experiences, and has a sharp tongue when he wants to use it. He has great patience, but a monumental anger that never rises to greater heights than when he thinks he has encountered dishonesty. "I don't think you're telling me the truth," he barked into the phone on one recent occasion, "and I won't do business with you. What? Of course I'm upset. Don't I sound upset?" He was, in fact, so upset that he lit a cigarette without inserting it in the holder he invariably uses for his two packs a day.

• **Keeping Faith**—Such incidents as the Willys purchase—which some have said was not fair to the Kaisers, do not darken Edgar's faith in people. The recent agreement with the United Automobile Workers (CIO) Local 12 in Toledo to handle the Ohio distributorship for Kaiser-Willys vehicles (BW—May 22 '54, p. 31), demonstrates the point. Not long before this agreement, Kaiser and the union had worked out a wage revision that was primarily beneficial to the company.

When news of the distributorship proposal leaked out in Toledo, Kaiser was really upset to hear the comment that the distributorship would be a "payoff" to the union for the wage arrangement. To him, the proposal was evidence that the union was sincerely interested in management problems. He was shocked that anyone—whether knowing Edgar Kaiser personally or not—would attribute base motives to a man.

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steel

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LOCAL BUSINESS

Missing Link

ALBANY, N. Y.—One big advantage of the network of toll roads that's spreading over the country is that they're planned to connect at the state lines so a vehicle can continue its toll trip uninterrupted. But what if the restrictions on two states' roads differ?

New York and New Jersey are having that trouble now. Both of New Jersey's toll roads—the Turnpike and the Garden State Parkway—stop short of the New York line as originally planned, and only a few miles apart. The state decided only one of them should be extended to meet the New York Thruway, and chose the Parkway. New York was agreeable, and planned its connecting link accordingly.

But trucks are forbidden to use the Garden State Parkway. And the Thruway Authority, which expects a major share of its revenue from trucks, decided to provide for trucks that want to continue south through New Jersey. So it plans a second spur to the New Jersey line.

Now New Jersey is on the spot. It doesn't want to extend the Turnpike as well as the Parkway. But if it doesn't, it's faced with a flood of heavy commercial traffic on roads that aren't built to take it.

Mental Quirk

SANTA FE—In a praiseworthy effort to protect New Mexico's mentally ill residents, last year's legislature seems to have clouded the title of every parcel of land sold in the state.

One of the provisions of a new, complete rewrite of the state's old insanity law forbids the disclosure, except on court order for specified purposes, of any records pertaining to any of the affairs of a "mentally ill" person—the new law's term for people classed under the old law as insane.

The purpose of the provision seems to have been to prevent unauthorized persons from obtaining information on a patient's health or financial condition. But the law also turns out to prevent a buyer of property, or a lender of money, from going to court records to find out whether a person with whom he plans a transaction is legally competent to do business. And if you buy property from a person who, it turns out later, was mentally ill, the sale's no good.

Result is that all title-search abstracts now being prepared in the state carry a notation that no check for insanity has been made, which relieves the abstracting company of liability. Title insurance

firms are still writing policies with their fingers crossed. Next year's legislature will probably amend the law.

The Winner

KANSAS CITY—The latest round in the long battle between the railroads and the inland waterways barge operators has just been fought in Kansas City, and the inland waterways won. The city has only one municipal wharf for barge traffic—a small, run-down one. For years that was plenty. But in recent years, Federal Barge Lines, Inc., has been stepping up its service to the city, taxing the wharf to its utmost. Recently the Interstate Commerce Commission awarded a certificate to another barge line—Sioux City & New Orleans Barge Line, Inc.—to serve the city. So the city proposed to spend \$118,000 to enlarge and improve its wharf. The railroads fought it for months, taking full-page newspaper ads, and sending spokesmen from Washington to argue the matter before the council—but to no avail. Last week the council adopted the controversial measure.

Skyline Change

NASHVILLE—When the Life & Casualty Insurance Co. of Tennessee announced recently that it planned a 17-story office building in downtown Nashville, it caused quite a stir. The 17 stories would have made it the tallest structure in the city.

Now Nashville really has something to talk about: Life & Casualty has expanded its plan; it will erect a 30-story building. This will make it the tallest building in the Southeast.

Besides its height, the new building will have one other distinction—double-decker sidewalks, to permit shopping on two levels.

Update

LITTLE ROCK, ARK.—The battle of the power lines seems to be all over but the shouting. When the Arkansas Power & Light Co. wanted to string high-tension wires on high poles through a residential area, the residents first complained to the City Council (BW-Mar.20'54,p176); when that failed, they organized round-the-clock shifts to sit on the poles so the workmen couldn't erect them (BW-Jun.5'54,p116). Last week the company obtained an injunction against the sitters. The housewives decided to abide by the court order, and the posts are now going in.

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To Mobilize the Best Brains

More than any other single group, the business community has been identified with the Eisenhower Administration. Yet a growing number of businessmen have returned to private enterprise after a short interval in government service, and this "businessman's Administration" is finding it difficult to carry out the President's pledge to "mobilize the best brains in the country" to help him in his tasks.

The problem of getting businessmen to work for the government was the subject of some plain talk from Clarence B. Randall, chairman of Inland Steel Co., head of the Randall Commission, and a special assistant to the White House on foreign economic affairs. Addressing the National Sales Executives (page 56), he minced no words in laying the blame for the lack of businessmen in government squarely on businessmen themselves.

"Oh, how I envy the clarity of vision," Mr. Randall bitingly observed, "that comes to the traveling salesman in a railway buffet-car at the third highball. How simple the great problems become! But ask him to go down to Washington and take off his coat and give us two years of his life to help this Administration—that he prayed for for twenty years—and you'll find out instantly that he is the indispensable man in the basic industry in America."

No one could have better administered this needed rebuke than Randall himself, whose business reputation cannot be reproached even by those who oppose his views on foreign trade. Randall calls himself the most "bifurcated executive in America," because he divides his week in two, spending half in Chicago for Inland Steel, and the other half—with Saturdays and Sundays thrown in—putting his abilities to work in Washington.

But his joking description of himself hides his intense feelings about a citizen's obligation to his government. He is understandably annoyed at the type of businessman who, unwilling to take up government service himself, ridicules more public-spirited citizens.

After describing the business executive who keeps aloof from Washington, he noted that the government has a "group of dedicated men trying to serve their country unselfishly." He added: "I say this not in a partisan sense, because I have dedicated friends in the Democratic Party as in the Republican Party. I see young men serving their country because they want to do a job for America, men who could leave and make three times their present salaries—and who don't."

As he sees it, the business world does not have that "same sense of devotion to America that I get when I am in Washington. I think the contrary viewpoint usually prevails." He makes plain that this attitude must change, and he holds the "deep conviction that the first job of the American businessman is not his

duty to his company but his duty to the country."

What Randall was saying at Chicago is that government service is honorable, important, and meaningful. He was, in effect, demanding that businessmen shake off the old and outworn attitude toward "bureaucracy" and "big government" that has become almost a reflex action after twenty years of isolation from the center of power. To drive the point home, he even daringly suggested to his businessman audience that "if it is right that we should draft boys to face artillery fire, why shouldn't we draft boys to make the government work in peacetime?"

Randall may be overstating the case, but in view of his own devoted service, he has a right to go to extremes. A changed attitude on the part of some businessmen is needed. Working for the government involves many sacrifices, but they must be made by able executives if government is to tap this country's best brains.

Good Beginning

Social security coverage will be extended to almost 10-million more persons—virtually all the labor force—with the passage of a new House bill on social insurance. The bill still has to win Senate approval, but the support of both Republican and Democratic leadership assures a smooth victory.

Expansion of social security was one of the specific measures recommended by President Eisenhower. He also demanded an increase in benefits, and this, too, has been passed by the House. As a matter of fact, the social security program has become so much a part of our national life, that the only dispute between the parties was over the scale and scope of benefits rather than over principle.

This is commendable progress made possible by the fact that social security has helped, not hindered, the freedom and initiative of the individual. The view of the American Assembly, sponsored by Columbia University, for example, is that social security has made us "a stronger people—not a softer people," because it has raised our morale and made us more conscious of the problem. This appears evident in the enormous increase in both trade union-employer pension plans and private insurance coverage.

We are pleased to see that the House has approved these recommendations to bolster and expand the government insurance program. This action, however, also serves as a reminder that many other vital recommendations of the President have been either side-tracked or stalled in Congress. We hope that the passage of the social security bill is only a beginning, and that the comprehensive legislative program set forth by the Administration is given the consideration it deserves.



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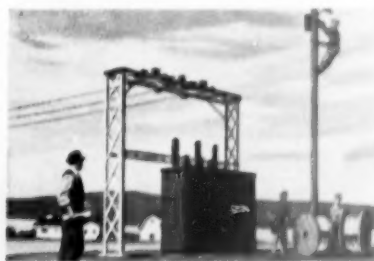
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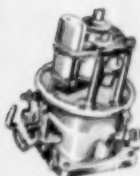


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